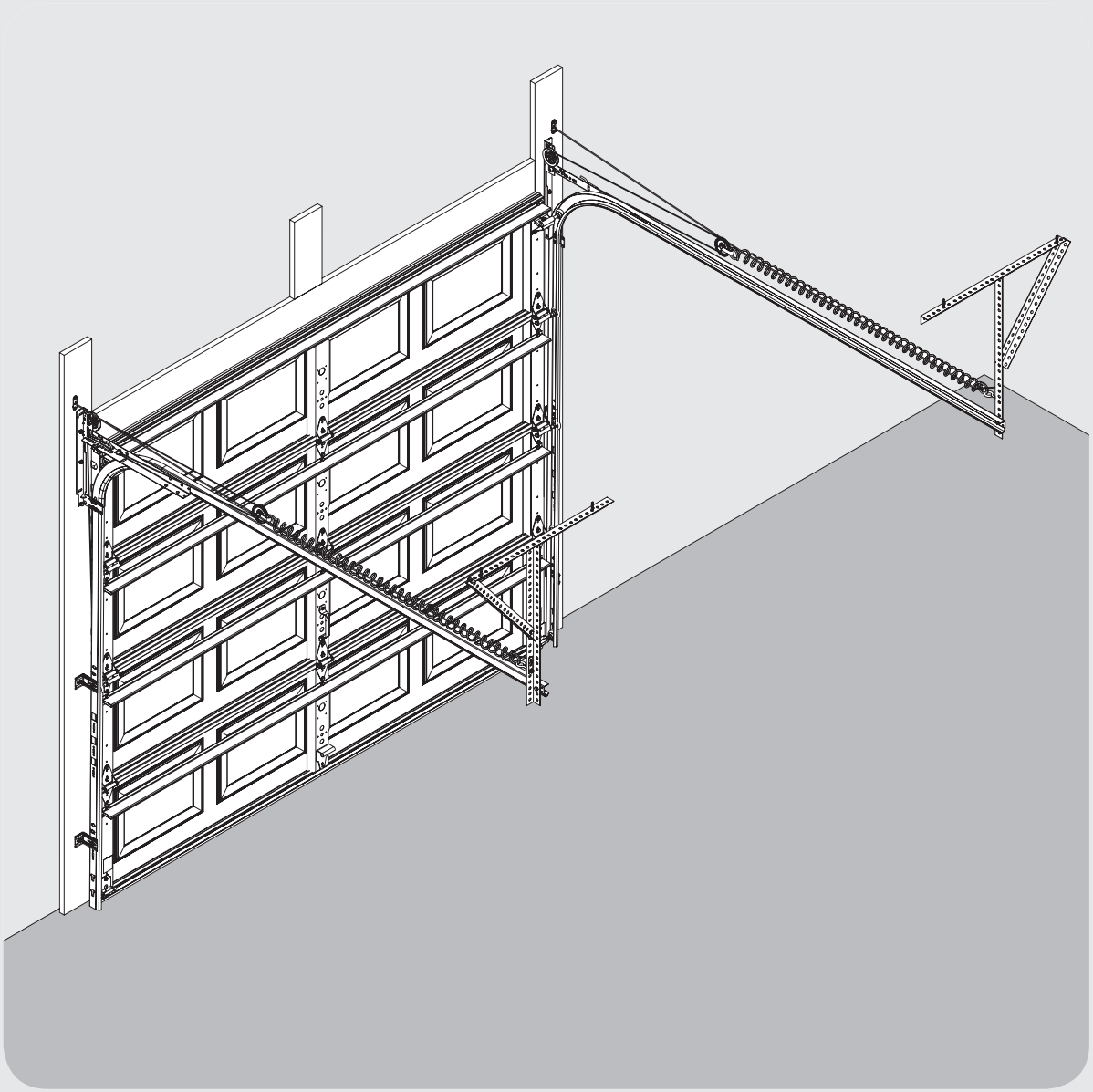
Wayne® Dalton

8000, 8100, 8200

Extension Spring

Installation Instructions and Owner's Manual



IMPORTANT NOTICE!

Read these instructions carefully before attempting installation. If in question about any of the procedures, do not perform the work. Instead, have a qualified door agency do the installation or repairs.

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Part No. 341824

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Table of Contents

Important Safety Instructions 2
Package Contents 3-4
Door Section Identification 4
Tools Required 5

Pre-Installation 5-10
- Removing The Old Door 5-9
- Preparing The Opening 10

Installation 11-31

Optional Installations 32-33
- Side Lock 32
- Pull Rope 32
- Trolley Operator 33

Maintenance 34
- Cleaning 34
- Painting Instructions 34

Warranty 35
Dealer Locator Information 36

Definition of key words used in this manual:

⚠ WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SEVERE OR FATAL INJURY.

CAUTION: PROPERTY DAMAGE OR INJURY CAN RESULT FROM FAILURE TO FOLLOW INSTRUCTIONS.

IMPORTANT: REQUIRED STEP FOR SAFE AND PROPER DOOR OPERATION.

NOTE: Information assuring proper installation of the door.

⚠ WARNING

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A QUALIFIED DOOR AGENCY DO THE INSTALLATION OR REPAIRS.

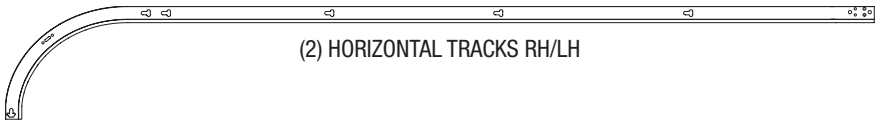
1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise eye injury could result.
4. Avoid installing your new door on windy days. Door could fall during the installation causing severe or fatal injury.
5. Doors 12'- 0" wide and wider should be installed by two persons, to avoid possible injury.
6. Operate door ONLY when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/or repairs made by a trained door system technician using proper tools and instructions.
8. DO NOT stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. DO NOT place fingers or hands into open section joints when closing a door. Use lift handles/gripping points when operating door manually.
10. DO NOT permit children to operate garage door or door controls. Severe or fatal injury could result, should the child become entrapped between the door and the floor.
11. Due to constant extreme spring tension, DO NOT attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, red colored fasteners, cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/or opener manufacturer's instructions.
14. VISUALLY inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. NEVER hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.

After installation is complete, fasten this manual near garage door.

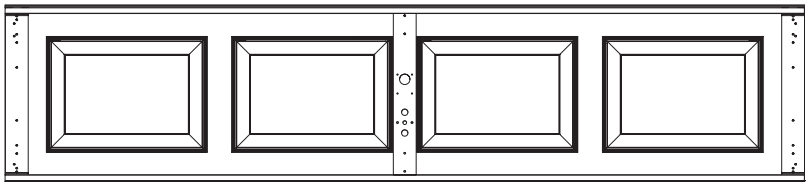
Please Do Not Return This Product To The Store. Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages/business listings or go to the **Find a Dealer** section online at **www.wayne-dalton.com**

Package Contents

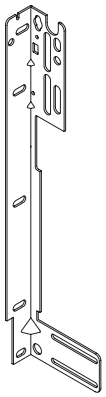
NOTE: DEPENDING ON THE DOOR MODEL, SOME PARTS LISTED WILL NOT BE SUPPLIED IF NOT NECESSARY. REAR SUPPORTS MAY OR MAY NOT BE INCLUDED WITH YOUR DOOR.



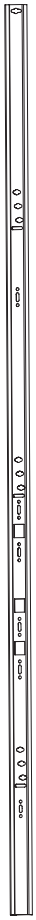
(2) HORIZONTAL TRACKS RH/LH



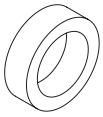
DOOR SECTIONS (AS REQUIRED)



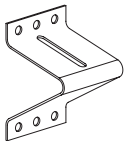
(2) FULLY ADJUSTABLE RH/LH FLAGANGLES



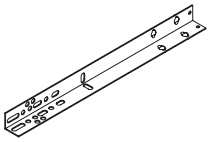
(2) VERTICAL RH/LH TRACKS



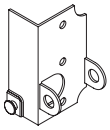
(2) ROLLER SPACERS



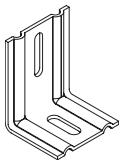
(2) TOP BRACKET BASES



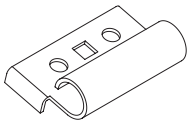
(2) HORIZONTAL ANGLES



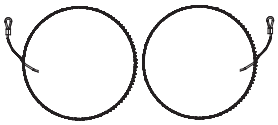
RIGHT AND LEFT BOTTOM BRACKETS



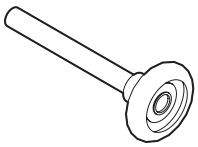
FULLY ADJUSTABLE JAMB BRACKETS (AS REQUIRED)



(2) TOP BRACKET SLIDES

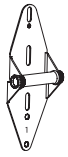


(2) COUNTERBALANCE CABLES



ROLLERS (AS REQUIRED)

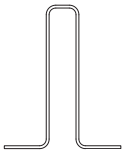
MANUAL



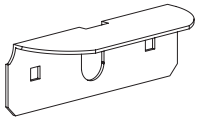
#1, #2, #3, & #4 HINGES (AS REQUIRED)

#6 SCREW EYE AND PULL ROPE (IF INCLUDED)

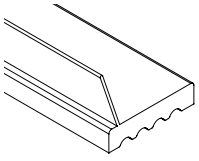
(2) LIFT HANDLES & SPACERS



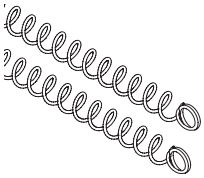
U-BAR (AS REQUIRED)



(2) STEP PLATES



WEATHER SEAL & NAILS (IF INCLUDED)



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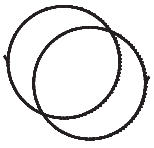
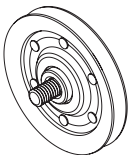
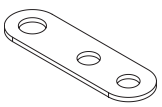


(2) SNUBBER CABLES

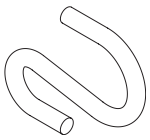


(2) FRONT SHEAVES

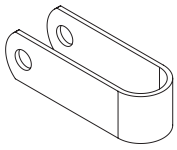
(2) REAR SHEAVES



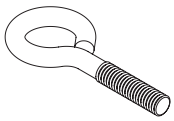
3 HOLE CLIPS (AS REQUIRED)



S-HOOKS (AS REQUIRED)



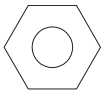
(2) SHEAVE FORKS

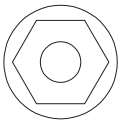


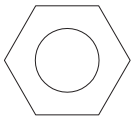
EYE HOOKS (AS REQUIRED)

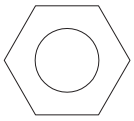
Please Do Not Return This Product To The Store. Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages/business listings or go to the **Find a Dealer** section online at **www.wayne-dalton.com**

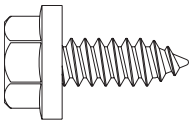
Package Contents Continued...

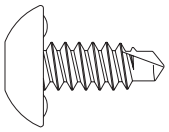

(2) 1/4"- 20 HEX NUTS

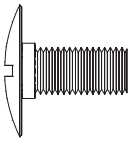

1/4"- 20 FLANGE HEX NUTS (AS REQUIRED)

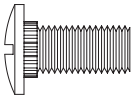

(2) 3/8"- 16 HEX NUTS

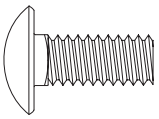

5/16"- 18 HEX NUTS (AS REQUIRED)

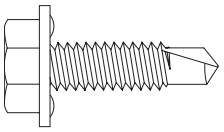

1/4"- 14 X 5/8" SELF TAPPING SCREWS (AS REQUIRED)

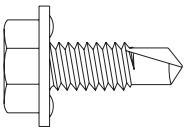

(2) 1/4"- 20 X 5/8" TAMPER RESISTANT SCREWS

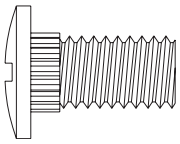

1/4"- 20 X 9/16" LARGE HEAD RIBBED TRACK BOLTS (AS REQUIRED)

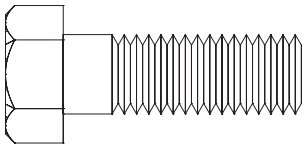

1/4"- 20 X 9/16" TRACK BOLTS (AS REQUIRED)

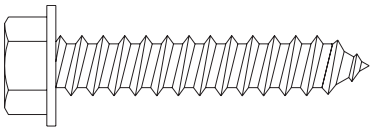

1/4"- 20 X 5/8" CARRIAGE BOLTS (AS REQUIRED)

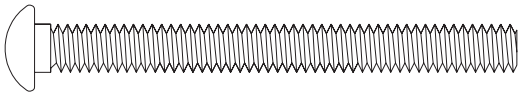

1/4"- 20 X 7/8" SELF DRILLING SCREWS (AS REQUIRED)

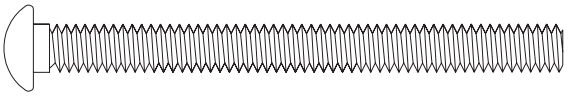

1/4"- 20 X 11/16" SELF DRILLING SCREWS (AS REQUIRED)


(2) 3/8"- 16 X 3/4" TRUSS HEAD BOLTS


3/8"- 16 X 1-1/4" HEX HEAD BOLTS (AS REQUIRED)


5/16" X 1- 5/8" HEX LAGS (AS REQUIRED)


(2) 1/4" X 2- 1/2" CARRIAGE BOLTS


(2) 1/4" X 2-3/4" CARRIAGE BOLTS

Door Section Identification

Tools Needed:

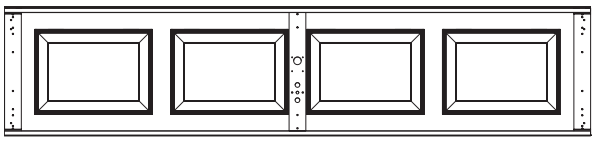
The **BOTTOM SECTION** can be identified by the factory attached bottom astragal, or by the bottom bracket warning labels on each end stile. This section is always the 1st section on four and five section doors.

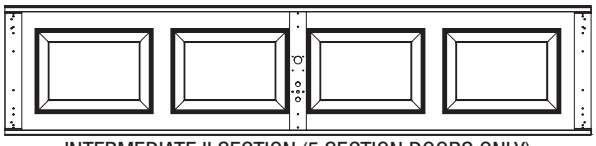
The **LOCK SECTION** may have a yellow and black warning label on the right side of the section. This section is always the 2nd section on four and five section doors.

The **INTERMEDIATE I SECTION** may have a warning label attached to either right or left hand endstile of the section. This section is always the 3rd section from the bottom of the door.

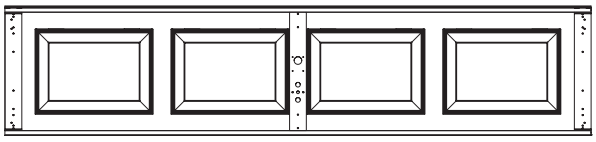
The **INTERMEDIATE II SECTION** is always the 4th section on five section door.

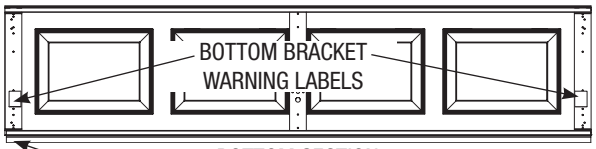
The **TOP SECTION** is always the 4th section on four section door and the 5th section on five section door.


TOP SECTION


INTERMEDIATE II SECTION (5 SECTION DOORS ONLY)

INTERMEDIATE I SECTION


LOCK SECTION



BOTTOM SECTION

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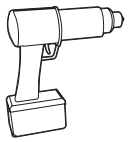
Tools Required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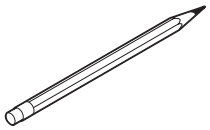
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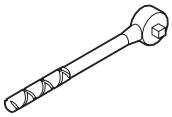
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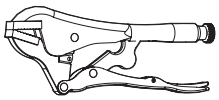
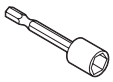
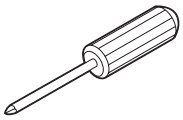
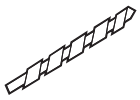

VICE GRIPS

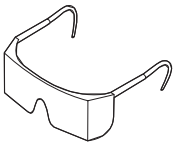

3/8", 7/16" SOCKET DRIVER

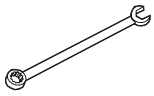
GLOVES

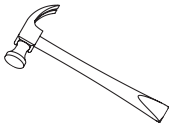

PHILLIPS HEAD SCREWDRIVER

7/16", 1/2" & 9/16" SOCKET


9/32", 1/2", 3/16" & 1/8" DRILL BITS


SAFETY GLASSES


1/4", 3/8", 7/16", 1/2" & 9/16" WRENCHES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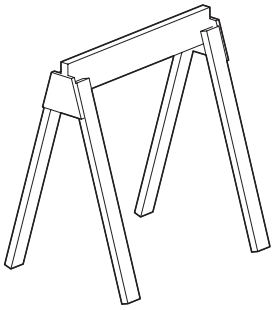
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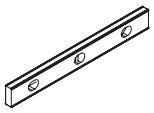
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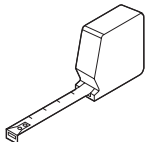
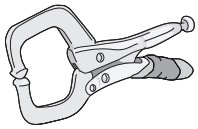
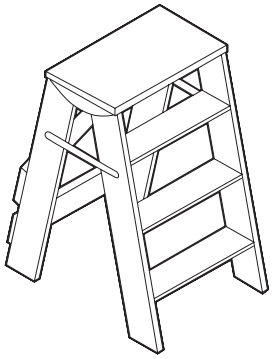
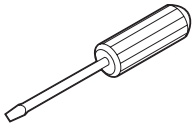
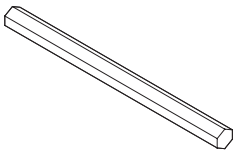
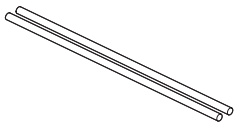

TAPE MEASURE


VICE CLAMPS


STEP LADDER


FLAT TIP SCREWDRIVER


1/4" TORX BIT


APPROVED WINDING BARS

Removing An Old Door

⚠ WARNING

IF YOUR COUNTERBALANCE SYSTEM IS OTHER THAN THOSE MENTIONED, DO NOT ATTEMPT TO WORK ON IT, BUT HAVE A QUALIFIED DOOR AGENCY PERFORM THE WORK. OTHERWISE, SEVERE OR FATAL INJURY COULD RESULT.

⚠ WARNING

DISCONNECT AND REMOVE ANY ELECTRIC OPENER PRIOR TO REMOVAL OF COUNTERBALANCE SYSTEMS TO PREVENT UNINTENDED DOOR OPERATION. OTHERWISE, SEVERE OR FATAL INJURY COULD RESULT.

⚠ WARNING

COUNTERBALANCE SPRING TENSION MUST BE RELIEVED BEFORE REMOVING ANY HARDWARE. A POWERFUL SPRING RELEASING IT'S ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY.

⚠ WARNING

IF YOU HAVE BACK PROBLEMS DO NOT ATTEMPT REMOVING DOOR, OR SEVERE INJURY COULD RESULT

⚠ WARNING

REMOVING AN EXISTING DOOR CAN BE DANGEROUS. FOLLOW INSTRUCTIONS ON PAGES 6-10 "REMOVING AN OLD DOOR/PREPARING THE OPENING" CAREFULLY, OTHERWISE, SEVERE OR FATAL INJURY COULD RESULT.

If you have an existing door, follow the instructions to identify which counterbalance removal is necessary. The process of removing an existing door begins by identifying it's counterbalance system. If you are not removing an existing door, proceed to PREPARING THE OPENING on page 10. Generally, you will find three (3) types of counterbalance systems: Extension Spring, Wayne-Dalton® exclusive TorqueMaster® and Torsion counterbalance system, see pages 6-9.

For more technical information regarding the opening preparation, installation and use of your garage door and opener, you can go to www.dasma.com and click on Publications and then Technical Data Sheet.

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P1

Torsion Spring Removal For Standard Lift

Tools Needed:

Recommended tools from page 5

⚠ WARNING

FAILURE TO USE APPROVED WINDING BARS CAN CAUSE SPRING ENERGY TO BE RELEASED SUDDENLY, RESULTING IN SEVERE OR FATAL INJURY.

⚠ WARNING

COUNTERBALANCE SPRING TENSION MUST BE RELIEVED BEFORE REMOVING ANY HARDWARE. A POWERFUL SPRING RELEASING IT'S ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY.

Do not release the torsion spring tension unless you are a qualified and experienced door technician. Instead have a professional door agency release the tension.

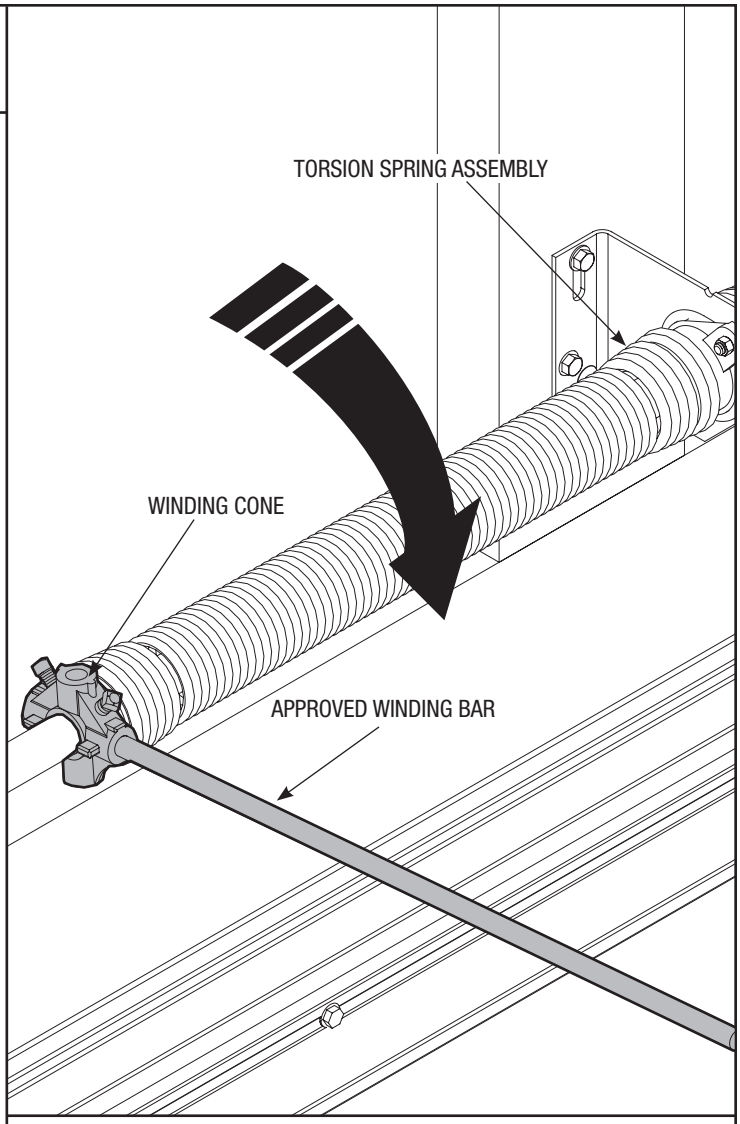
Step 1: Close the door and place vice clamps on the back legs of both vertical tracks, above the third roller to prevent the door from lifting as you unwind the springs. Use only approved winding bars available from your dealer. Do not use undersized steel rods, screw drivers or anything else to unwind the springs. Position the ladder just off to the side of the winding cone. The winding cone should be easy to reach without putting your body directly in front of it.

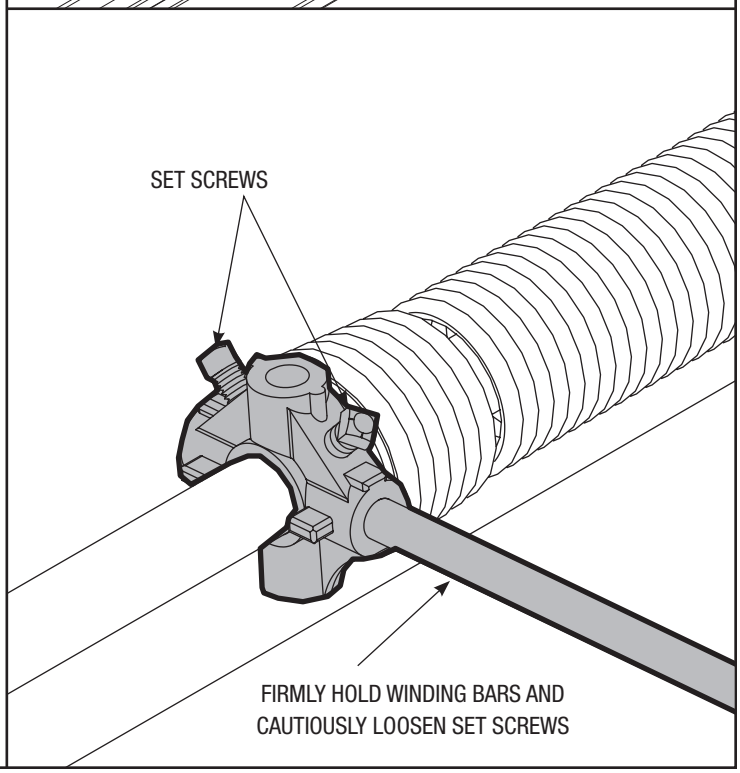
Step 2: Insert a winding bar into one of the holes in the winding cone. Exert upward pressure. Using caution, loosen the two (2) set screws in the winding cone. Be prepared to support the full torsional force of the spring when the set screws are loosened.

Step 3: Once set screws are loose, slowly and carefully lower the winding bar until it rests against the door. Insert other winding bar into the upper hole. Push up and remove lower bar. Carefully lower upper winding bar, until it contacts the door. Repeat process, 1/4 turns at a time until all tension is relieved. If your door is equipped with two (2) torsion springs, follow the same procedure to relieve tension on the second spring.

Step 4: Remove vice clamps from tracks, unbolt torsion shaft assembly and remove from work area.

NOTE: Continue with "P4" on page 9 after completing this step.





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P2

TorqueMaster® Spring Removal

Tools Needed:

Recommended tools from page 5

A TorqueMaster® spring system can be identified by the end brackets. For single spring applications, the right hand end bracket will always have a drive gear, counter gear, counter cover, and a winding bolt head. The left hand end bracket will have no gears, counter cover, or winding bolt head. The hole for the winding bolt head will be plugged.

For double springs, both the right hand and left hand end brackets will always have a drive gear, counter gear, counter cover and a winding bolt head.

IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

Step 1: If you have a black counter cover: Place a mark on the drive gear tooth and an adjacent mark on the right hand end bracket (Fig. 1). Loosen the lock nut using a 7/16" wrench and continue with step 2.
If you have a gray counter cover: Loosen the lock nut using a 7/16" wrench and continue with step 2.

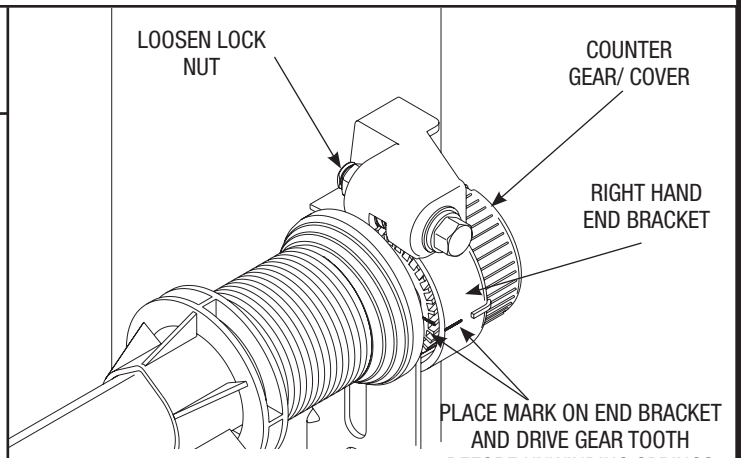
Step 2: Using an electric drill (High torque / gear reduced to 1300 rpm preferred) with a 7/16" hex head driver, unwind the right hand winding bolt head counterclockwise (Fig. 2) and count the number of turns the mark on the drive gear passes the adjacent mark on the end bracket. Referencing the chart below, by door height, stop unwinding the spring once the counted turns have reached the listed number of turns.

- 6'- 0" Door Height = 14 turns
- 6'- 3" Door Height = 14 1/2 turns
- 6'- 5" Door Height = 15 turns
- 6'- 6" Door Height = 15 turns
- 6'- 8" Door Height = 15 1/2 turns
- 6'- 9" Door Height = 15 1/2 turns
- 7'- 0" Door Height = 16 turns
- 7'- 3" Door Height = 16 1/2 turns
- 7'- 6" Door Height = 17 turns
- 7'- 9" Door Height = 17 1/2 turns
- 8'- 0" Door Height = 18 turns

CAUTION: DO NOT USE IMPACT GUN TO UNWIND SPRINGS.

IMPORTANT: DO NOT REFERENCE THE COUNTER COVER WHEN COUNTING THE NUMBER OF TURNS BEING UNWOUND ON THE SPRING, BUT FOLLOW THE INSTRUCTIONS ABOVE.

Step 3: Verify that spring tension has been released by pulling the counterbalance cable on the right hand cable drum away from the header (Fig. 3). If spring tension has been released, the cable will be loose. In addition, the TorqueMaster® Spring Tube should be free to rotate in either direction.


LOOSEN LOCK NUT
COUNTER GEAR/ COVER
RIGHT HAND END BRACKET
PLACE MARK ON END BRACKET AND DRIVE GEAR TOOTH BEFORE UNWINDING SPRINGS
Fig. 1

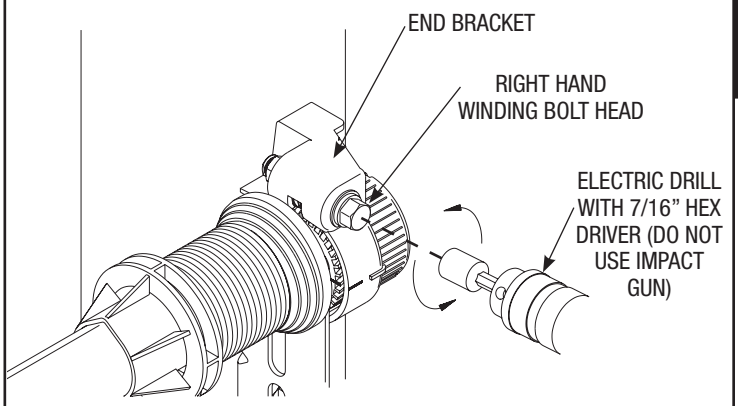


Fig. 2

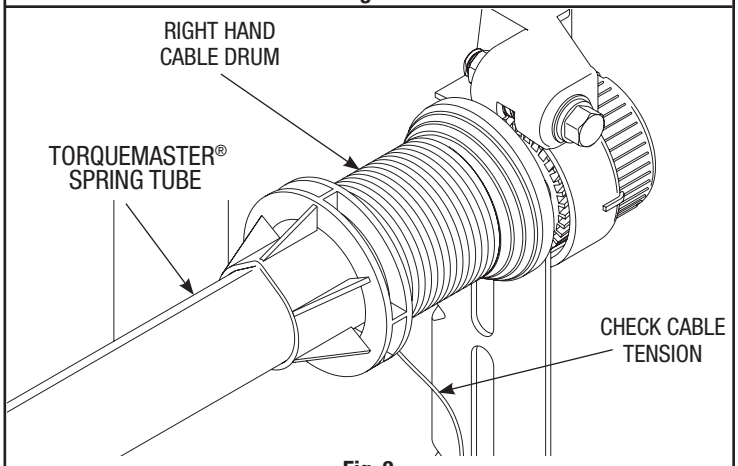


Fig. 3

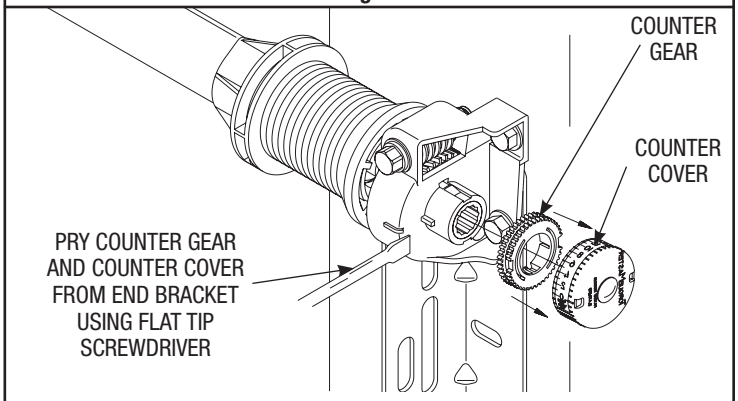


Fig. 4

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TorqueMaster® Spring Removal continued...

Tools Needed:

Recommended tools from page 5

If the counterbalance cable is still taut and the TorqueMaster® spring tube is difficult to rotate, that is an indication that spring tension still exists on the left hand spring. Repeat Steps 1 and 2 for releasing spring tension on the left hand side.

Step 4: Using a flat tip screwdriver, pry the counter gear and counter cover from the right hand end bracket (Fig. 4 on previous page). Discard the counter gear and counter cover. On double spring applications, repeat for left hand side.

Step 5: Remove the upper 5/16" x 1-5/8" lag screw from the right hand end bracket (Fig. 5). Attach locking pliers to the upper portion of the end bracket and hold the housing steady while removing the lower 5/16" x 1-5/8" lag screw and #10 x 1/2" phillips head screw from the end bracket (Fig. 6).

Step 6: Holding the right hand end bracket steady with locking pliers, carefully pry the end bracket and drive gear off the winding shaft using a flat tip screwdriver (Fig. 7).

CAUTION: THE WINDING SHAFT MAY ROTATE WHEN REMOVING THE END BRACKET AND DRIVE GEAR.

Step 7: Repeat Step 4 for the left hand side. Holding the left hand end bracket steady with locking pliers, carefully pry the end bracket off the winding shaft using a flat tip screwdriver (Fig. 7).

Step 8: Remove the two (2) lag bolts attaching the center bracket assembly to the header board (Fig. 8).

Step 9: Lift the right hand side of the TorqueMaster® Spring Tube and slide the cable drum off. Realign the groove in the winding shaft with the round notch in the flagangle and drape the counterbalance cable with drum over the flagangle. Lift the left hand side of the TorqueMaster® Spring Tube and slide the cable drum and winding shaft off (Fig. 9). Drape the counterbalance cable with drum over the flagangle. Lift the TorqueMaster® spring assembly off the flagangles and out of the doorway. Unhook the counterbalance cables from the bottom brackets and remove all parts from the work area.

NOTE: The cable drums may be difficult to remove. If so, twist the cable drum to aid in removal.

NOTE: Continue with "P4" on page 9 after completing this step.

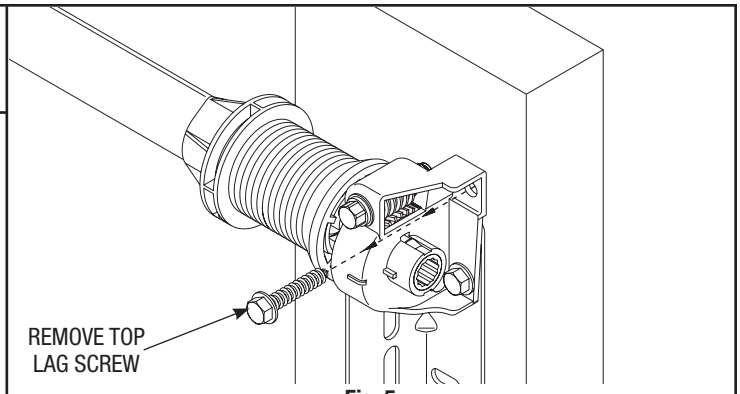

Fig. 5

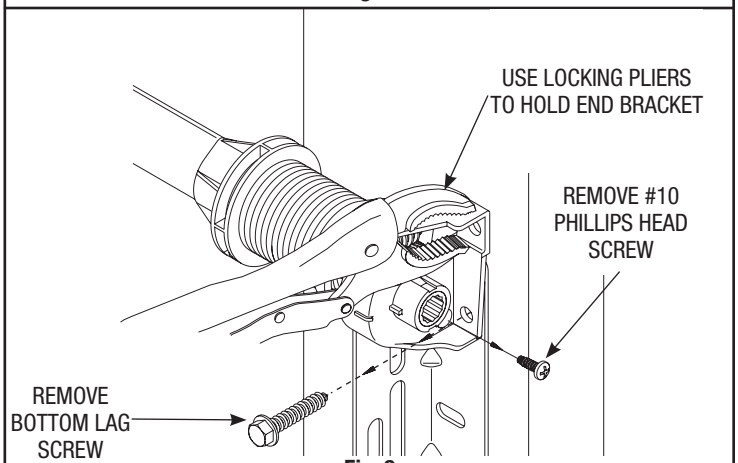

Fig. 6

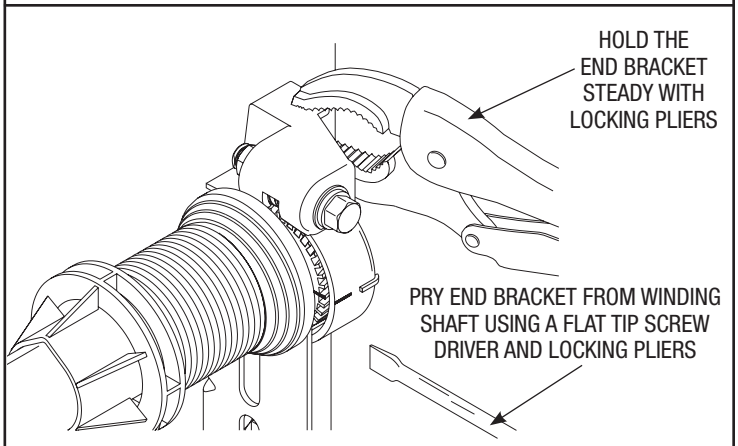

Fig. 7

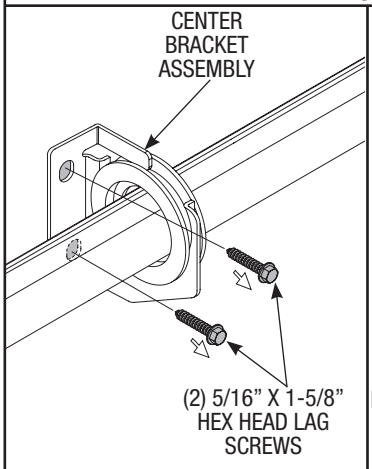

Fig. 8

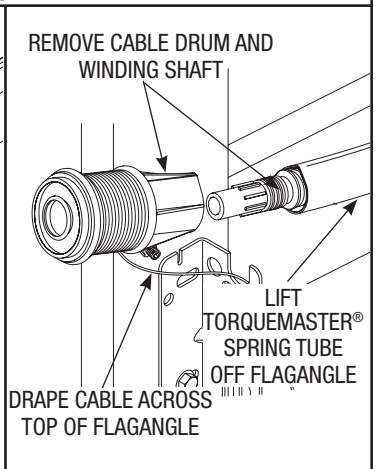

Fig. 9

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P3

Extension Spring Removal

Tools Needed:

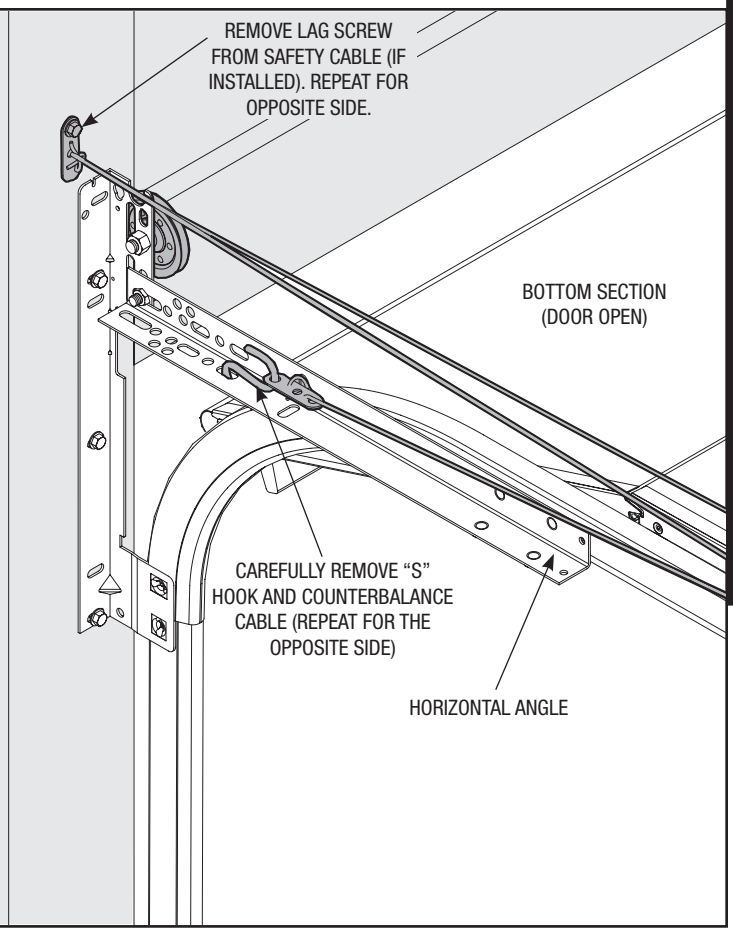
Recommended tools from page 5

Step 1: Raise the door to the fully open position and place vice clamps to the back legs of both vertical tracks, below the bottom rollers to prevent the door from falling. By opening the door you release most of the spring tension. Carefully unfasten the S-hook from the horizontal angle. Remove cable, sheave and extension spring. Repeat for the other side. If safety cables are running through the extension springs, remove them also. Remove parts from work area.

Step 2: Holding door in the open position, remove the vice clamps, be prepared to support the entire weight of the door. Garage doors can weigh 200-400 pounds.

With assistance, carefully lower the door, by grasping the door firmly by it's lift handles. Do not place fingers or hands near joints, between sections, or between bottom of door and floor. Otherwise, severe injury could result.

NOTE: Continue with "P4" on page 9 after completing this step.


REMOVE LAG SCREW FROM SAFETY CABLE (IF INSTALLED). REPEAT FOR OPPOSITE SIDE.
BOTTOM SECTION (DOOR OPEN)
CAREFULLY REMOVE "S" HOOK AND COUNTERBALANCE CABLE (REPEAT FOR THE OPPOSITE SIDE)
HORIZONTAL ANGLE

P4

Removing the Old Door

Tools Needed:

Recommended tools from page 5

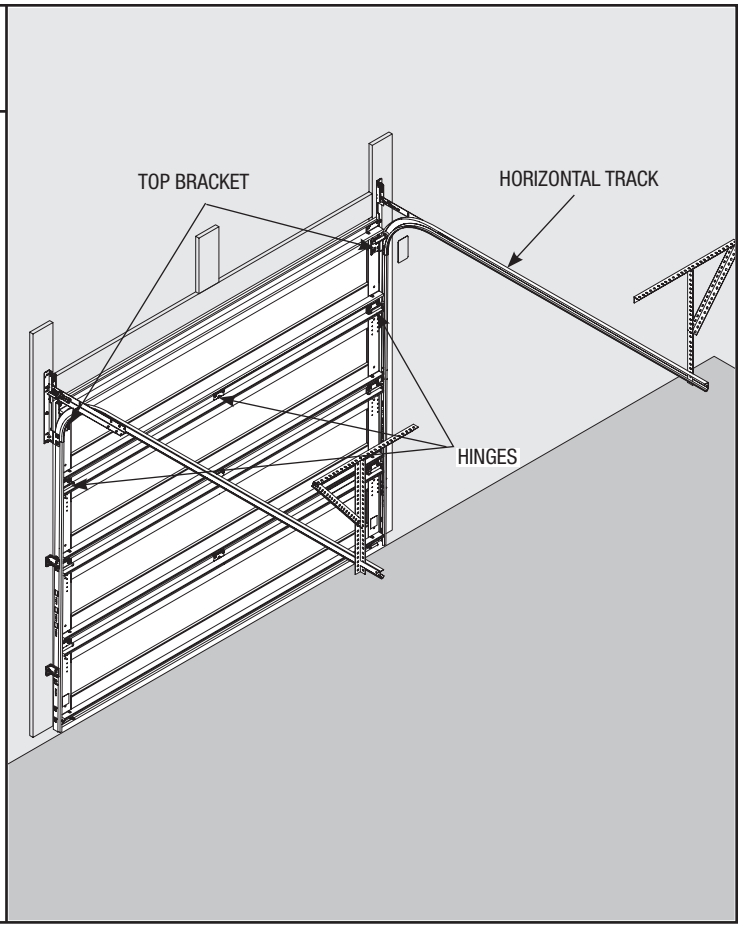
Having removed the counterbalance system, the door can now be disassembled.

Start by first removing the top row of hinges.

With assistance, hold the top section to keep it from falling and remove the top brackets. With assistance, lift the top section out of the opening and remove it from the work area. Repeat for all remaining sections.

After door is disassembled, unbolt both track assemblies from the jambs and remove all material from the work area. You can neatly dispose of the old door by placing it in the carton of your new door.

Clean up area and complete "Preparing the Opening" "P5" on page 10 before installing the new door.



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P5

Preparing the Opening

Tools Needed:

Recommended tools from page 5

⚠ WARNING

FAILURE TO SECURELY ATTACH A SUITABLE MOUNTING PAD TO STRUCTURALLY SOUND FRAMING COULD CAUSE SPRINGS TO VIOLENTLY PULL MOUNTING PAD FROM WALL, RESULTING IN SEVERE OR FATAL INJURY.

If you just removed your existing door or you are installing a new door, complete all steps in PREPARING THE OPENING.

To ensure secure mounting of track brackets or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA Technical Data Sheets #156, #161 and #164 at www.dasma.com.

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for Extension spring applications. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm).

IMPORTANT: Closely inspect jambs and header material. Any wood found not to be sound, must be replaced.

Weather Seal (May Not Be Included):

Cut or trim the weather seal (if necessary) to the header and jambs.

For quick install track: Align the header seal with the inside edge of the header and temporarily secure it to the header with equally spaced nails. Next, fit the jamb seals up tight against the header seal and flush with the inside edge of the jamb. Temporarily secure the jamb seals with equally spaced nails. This will keep the bottom section from falling out of the opening during installation.

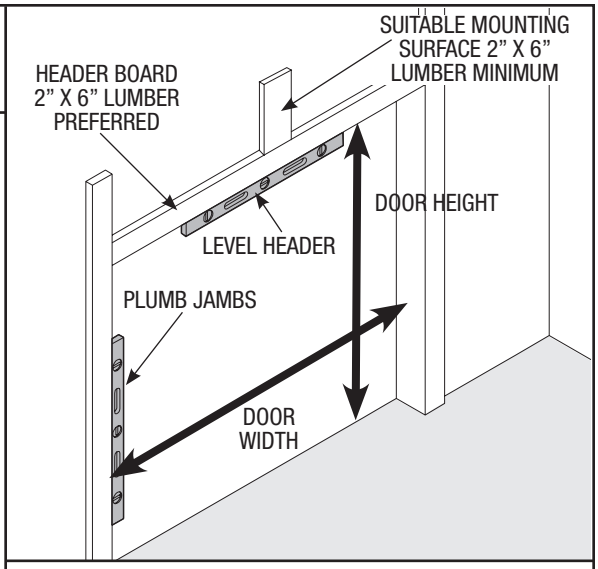
For fully adjustable track: Align the header seal 1/8" to 1/4" inside the header and temporarily secure it to the header with equally spaced nails. Next, fit the jamb seals up tight against the header seal and 1/8" to 1/4" inside the jamb. Temporarily secure the jamb seals with equally space nails approximately 12" to 18" apart. This will keep the bottom section from falling out of the opening during installation.

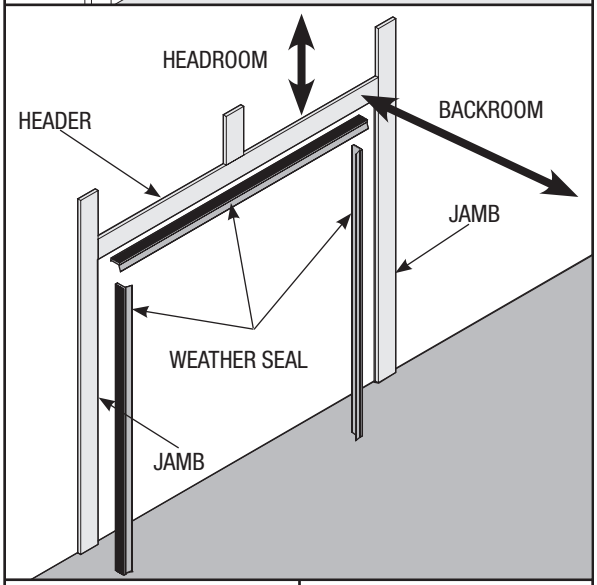
NOTE: Do not permanently attach weather seal to the jamb at this time.

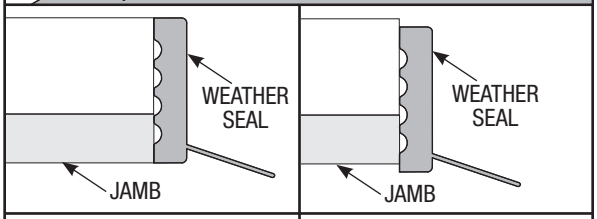
HEADROOM REQUIREMENT: Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

NOTE: 6" LHR Conversion Kit is available for 12" Radius only. Contact your local Wayne-Dalton dealer.

BACKROOM REQUIREMENT: Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.







QUICK INSTALL TRACK | FULLY ADJUSTABLE TRACK

HEADROOM REQUIREMENT

TRACK TYPE	Extension Springs
15" Radius Track	11-3/4"
12" Radius Track	10-1/2"
6" LHR Kit	6"

BACKROOM REQUIREMENT

DOOR HEIGHT	TRACK	MANUAL LIFT	MOTOR OPERATED
6'6", 7'0"	12", 15" Radius	98"	120"
7'6", 8'0"	12", 15" Radius	110"	132"

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IMPORTANT: READ INSTRUCTIONS TITLED “P4” “REMOVING THE OLD DOOR” ON PAGE 9 AND “P5” “PREPARING THE OPENING” ON PAGE 10 BEFORE ATTEMPTING DOOR INSTALLATION.

IMPORTANT: STAINLESS STEEL OR PT 2000 COATED LAG SCREWS MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, OPERATOR MOUNTING/SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL LAG SCREWS ARE NOT NECESSARY WHEN INSTALLING PRODUCTS ON UNTREATED LUMBER.

NOTE: It is recommended that holes 5/16” x 1-5/8” lag screws be pilot drilled using a 3/16” drill bit. Holes for 1/4” x 2” lag screws and 1/4” x 1-1/2” lag screws be pilot drilled using a 1/8” drill bit, prior to fastening.

1

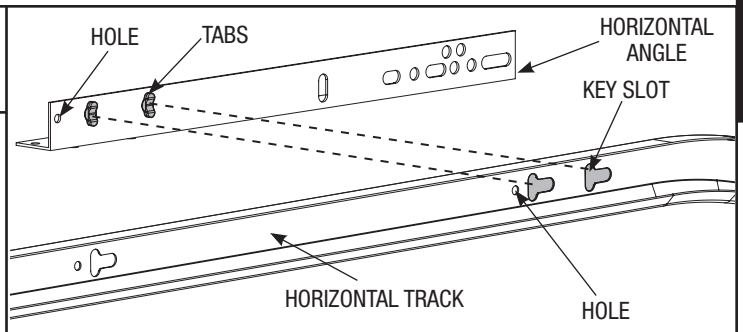
Horizontal Angle

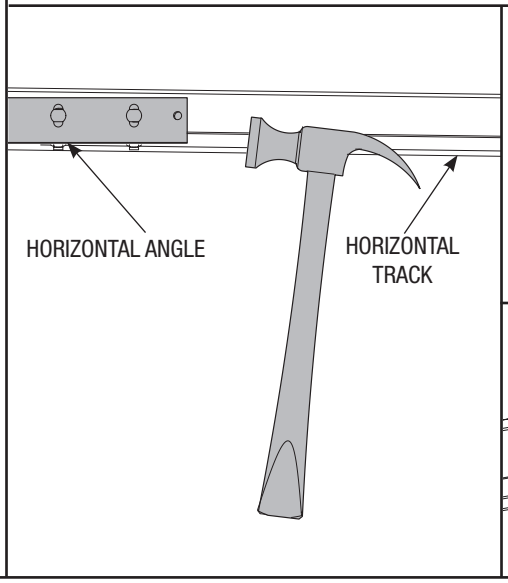
Tools Needed:

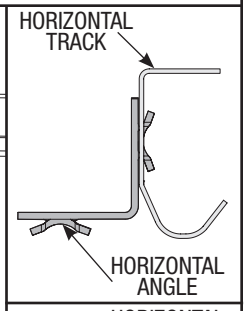
Hammer

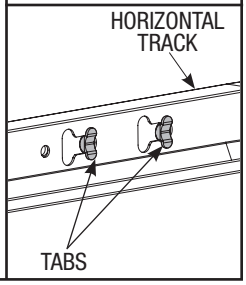
Position the horizontal angle as shown. Place tabs of horizontal angle in the key slot of horizontal track. Using a hammer, tap the horizontal angle towards the curved end of the track until the hole in track and angle are aligned. Set tracks aside.

NOTE: For larger doors, a full length horizontal angle may be spot welded to the horizontal track. If the horizontal angle is not welded, the horizontal angle will be installed as shown.









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2 Attaching Fully Adjustable Flagangle to Vertical Track

Tools Needed:

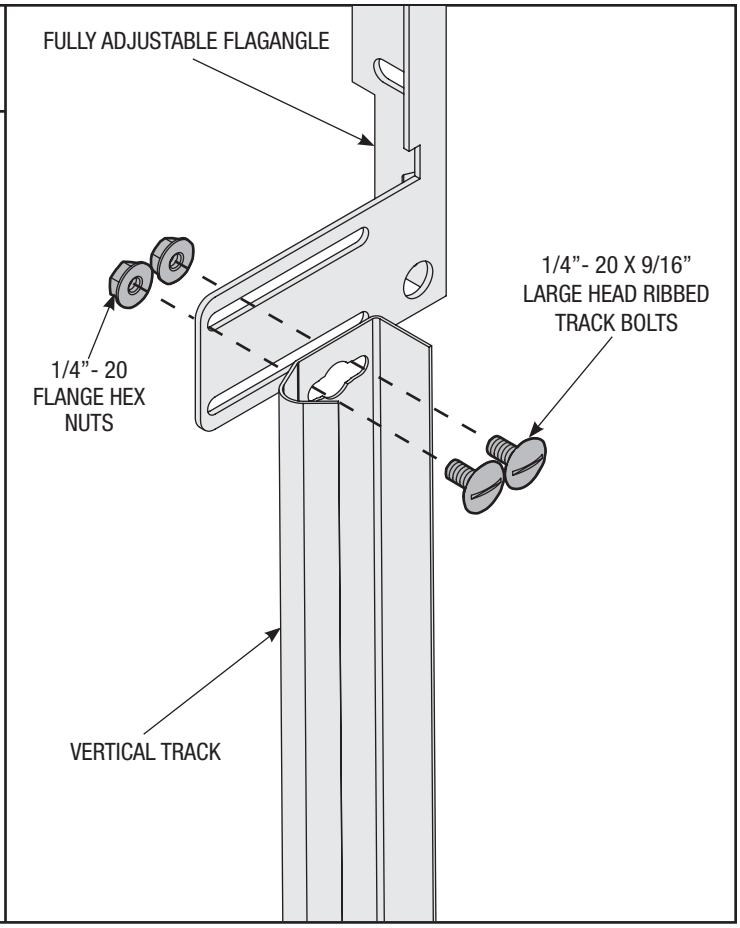
None

NOTE: If you have quick install flagangle, skip this step and complete Step 3.

NOTE: If you have riveted track, skip this step.

Hand tighten the flagangle to the vertical track using (2) 1/4"- 20 x 9/16" large head ribbed track bolts and (2) 1/4"- 20 flange hex nuts. Secure the flange nuts after flagangle spacing is complete (Step 15).

NOTE: After completing this step, continue with Step 4.



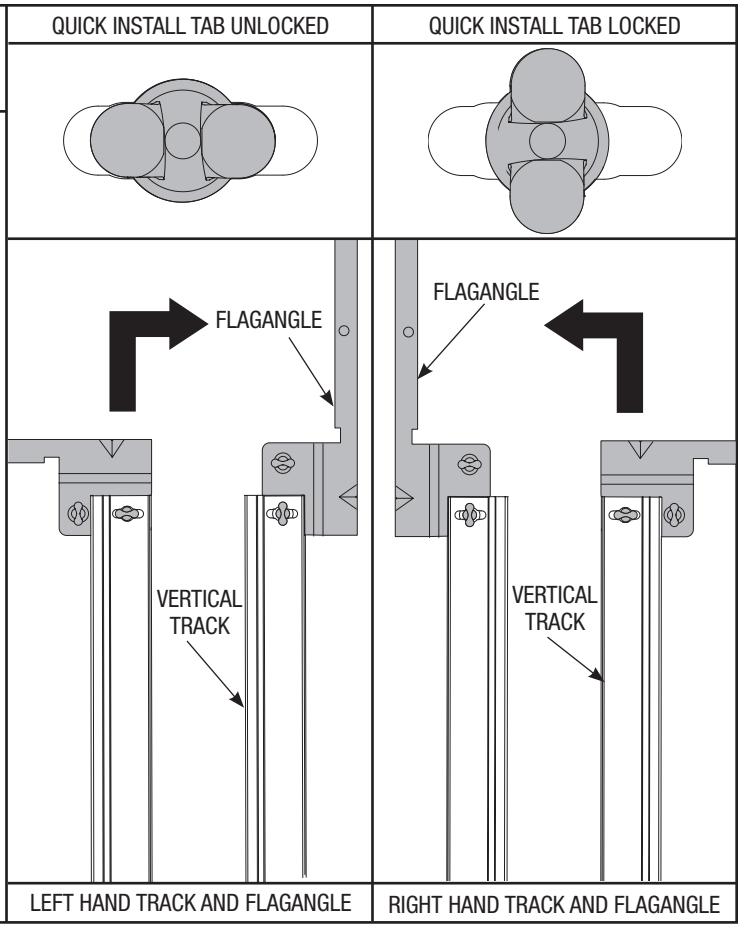
3 Attaching Quick Install Flag Angle to Vertical Track

Tools Needed:

None

NOTE: If quick install flagangle were installed in step 2, skip this step and continue with Step 4. If not, complete this step.
NOTE: If you have riveted track, skip this step.

Place the lower quick install tab of the flagangle in the quick install feature of the vertical track. Give the flagangle 1/4 turn to lock in place. Repeat for other side.



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4

Installing Fully Adjustable Jamb Brackets

Tools Needed:

None

NOTE: If you have quick install jamb brackets, skip this step and complete Step 5.
NOTE: If you have riveted track, skip this step.

The bottom jamb bracket is always the shortest bracket included with your door. If three jamb brackets are included with you door, the bottom center bracket is the middle bracket in height. The top jamb bracket is the tallest bracket included.

To attach the bottom jamb bracket, locate the lower hole/slot pattern of the vertical track. Align the slot in the jamb bracket with the lower hole of the hole/slot pattern in the vertical track. Secure jamb bracket, using
(1) 1/4"- 20 x 9/16" track bolt and (1) 1/4"- 20 flange hex nut.

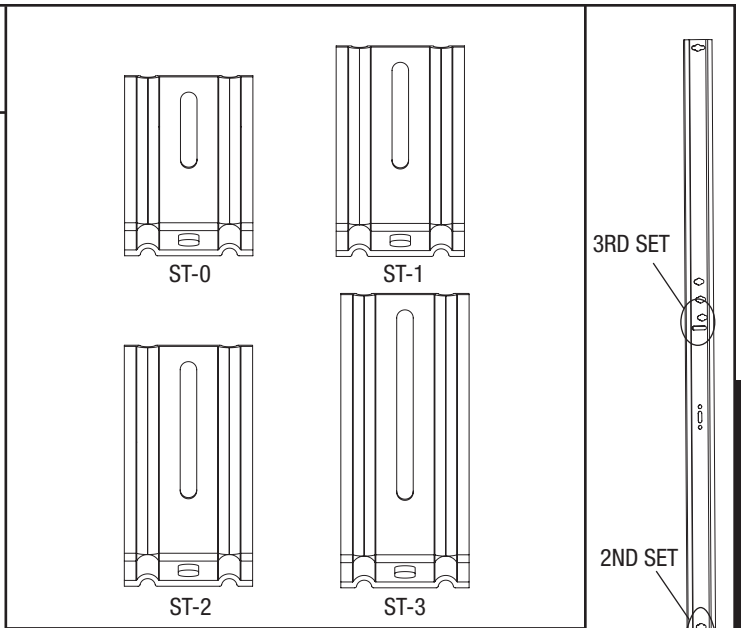
Place the center jamb bracket over the hole/slot pattern that is centered between the bottom jamb bracket and flagangle. Align the slot in the jamb bracket with the lower hole of the hole/slot pattern. Loosely fasten the bracket onto the track with (1) 1/4"- 20 x 9/16" track bolt and (1) 1/4"- 20 flange hex nut.

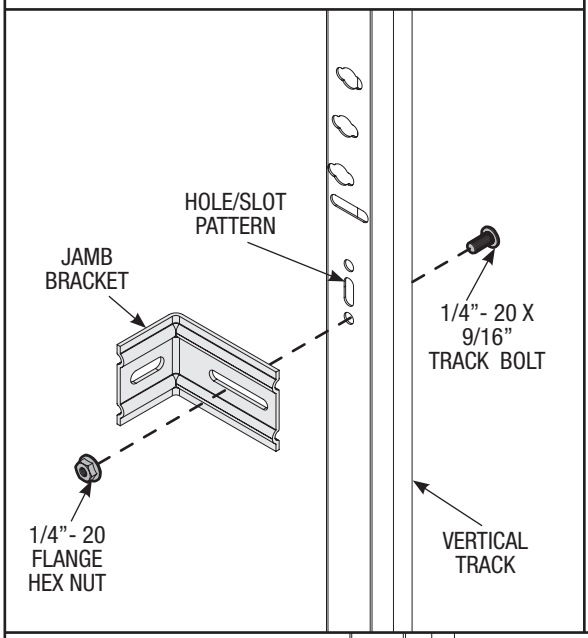
Repeat if a third jamb bracket is required, equally spacing the distance between the two center jamb brackets and the bottom jamb bracket and flagangle.

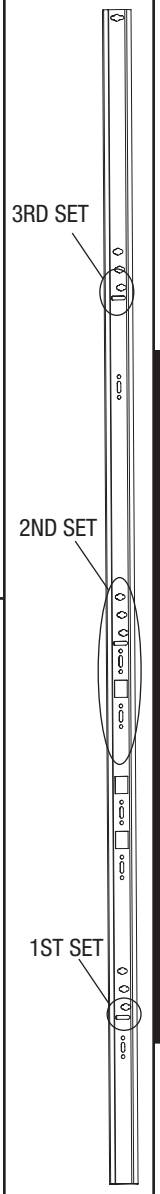
NOTE: Doors over 7'3" high get (3) sets of jamb brackets.

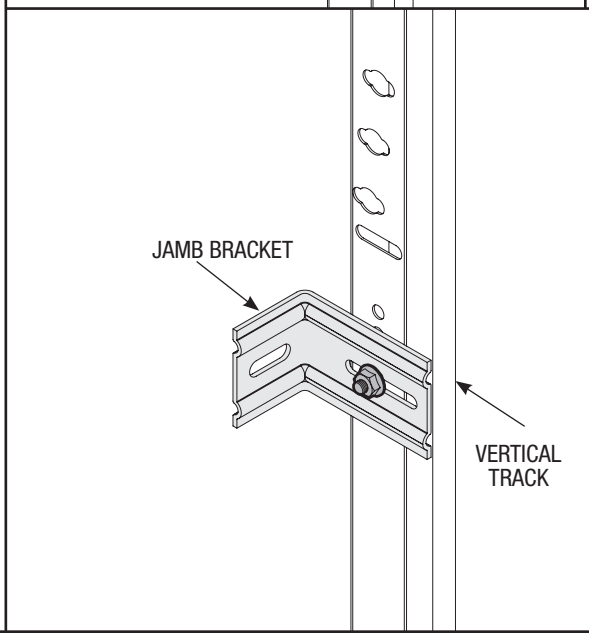
NOTE: The bottom jamb bracket is the shortest in length that is included with your door. It does not necessarily mean the "short" (ST-0) jamb bracket.

NOTE: After completing this step, continue with Step 6.









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5 Installing Q.I. Jamb Brackets

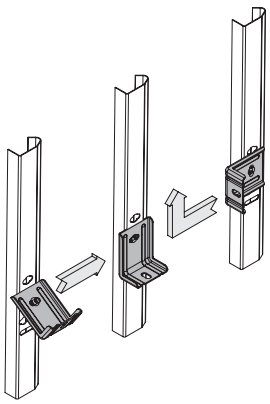
Tools Needed:

None

NOTE: If fully adjustable jamb brackets were installed in step 4, skip this step and continue with Step 6. If not, complete this step.
NOTE: If you have riveted track, skip this step.

Measure the length of the vertical tracks. Using the jamb bracket schedule, determine the placement of the jamb brackets for your door height and track type.

To install the jamb brackets, align the twistlock tab on the quick install jamb bracket with the quick install feature in the track and turn the bracket perpendicular to the track so the mounting flange is toward the back (flat) leg of the track.



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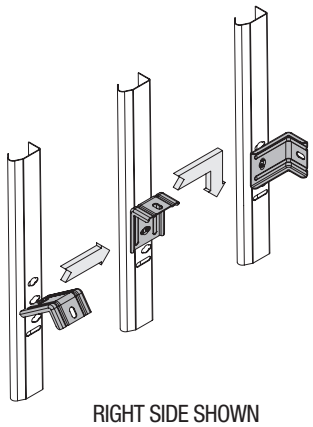

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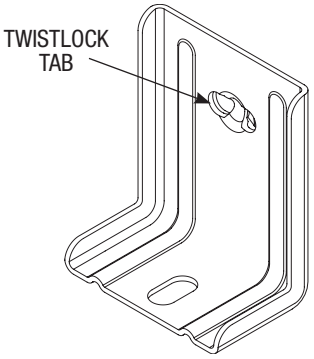

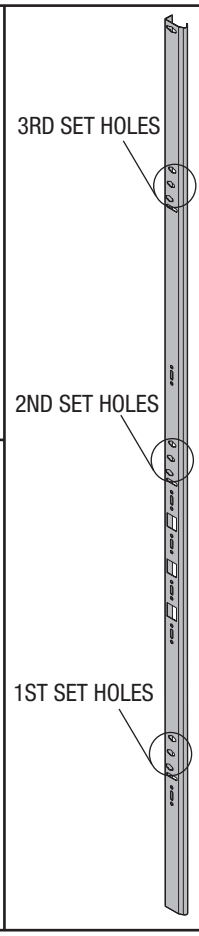

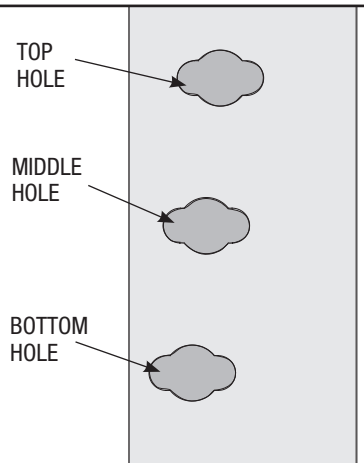

QUICK INSTALL FEATURE

JAMB BRACKET SCHEDULE						
DOOR HEIGHT	1ST SET		2ND SET		3RD SET	
	JAMB BKT	POS.	JAMB BKT	POS.	JAMB BKT	POS.
6'0" TRACK	QIJB - 9	MIDDLE	QIJB - 11	MIDDLE	NOT APPLICABLE	
6'3" TRACK	QIJB - 9	BOTTOM	QIJB - 11	MIDDLE	NOT APPLICABLE	
6'6" TRACK	QIJB - 9	MIDDLE	QIJB - 10	BOTTOM	NOT APPLICABLE	
6'9" TRACK	QIJB - 9	MIDDLE	QIJB - 10	BOTTOM	NOT APPLICABLE	
7'0" TRACK	QIJB - 9	MIDDLE	QIJB - 10	BOTTOM	NOT APPLICABLE	
7'6" TRACK	QIJB - 9	TOP	QIJB - 10	MIDDLE	QIJB - 11	MIDDLE
7'9" TRACK	QIJB - 9	TOP	QIJB - 10	MIDDLE	QIJB - 11	MIDDLE
8'0" TRACK	QIJB - 9	TOP	QIJB - 10	MIDDLE	QIJB - 11	MIDDLE

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6

Bottom Bracket

Tools Needed:

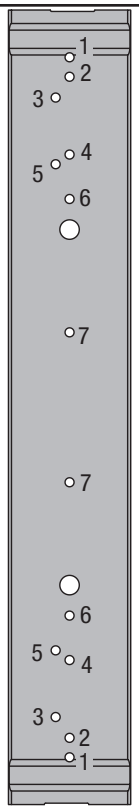
Power Drill

7/16" Socket Driver

Align center hole of bottom bracket with hole #3 hole in end stile of bottom section. Fasten with (2) 1/4"- 20 x 11/16" self drilling screws and (1) 1/4"- 20 x 5/8" tamper-resistant self drilling screw as shown.

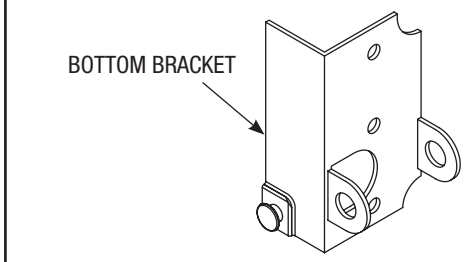
NOTE: Only doors provided to professional installers, who have required tools will be supplied with a tamper-resistant fastener. Use (1) 1/4"- 20 x 11/16" self drilling screw in bottom bracket, if not provided with a tamper-resistant screw.

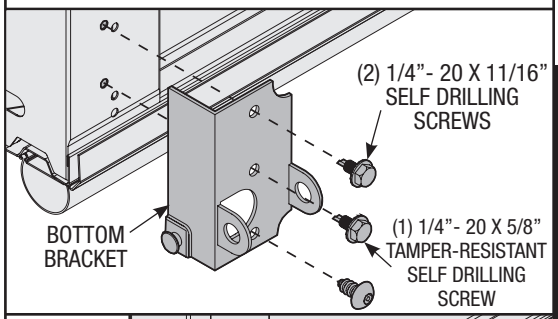
NOTE: Bottom section can be identified by the factory attached bottom astragal and by the bottom bracket warning labels on each end stile.

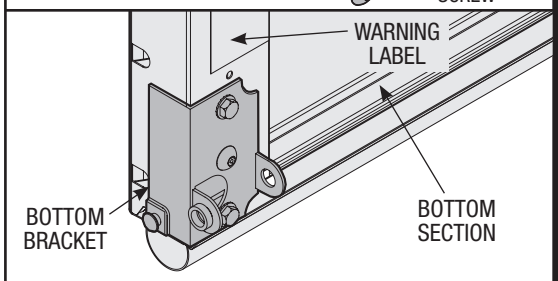


END STILE HOLE PATTERN

(LEFT SIDE IS SHOWN. RIGHT SIDE IS OPPOSITE.)







7

Counterbalance Cables

Tools Needed:

None

IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE GARAGE LOOKING OUT.

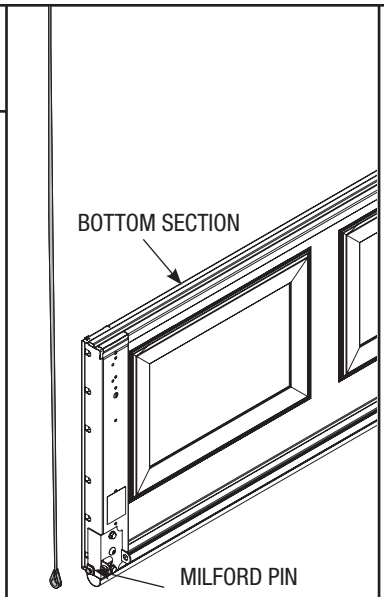
NOTE: For door section identification see page 4.

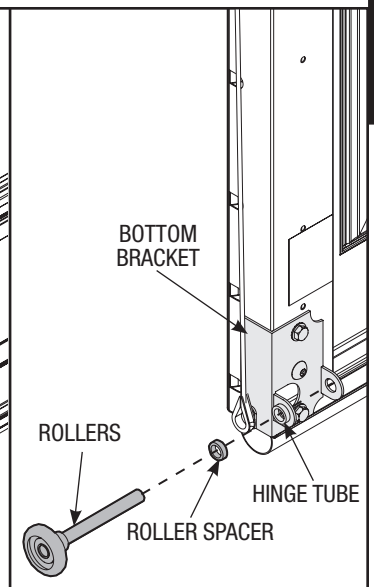
Uncoil the counterbalance cables and slip the loop at the ends of the cables over each milford pin on the bottom section.

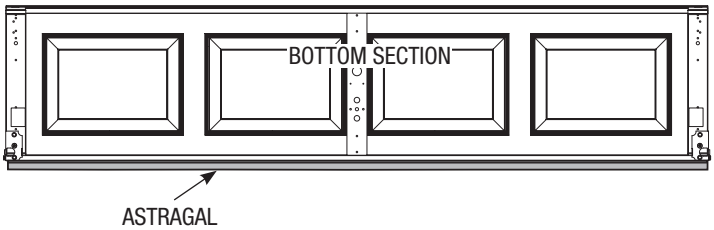
Insert a roller with a space into bottom bracket of the bottom section.

Repeat for other side.

NOTE: Verify astragal (bottom seal) is aligned with door section. If there is more than 1/2" excess astragal on either side, trim astragal even with door section.







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8

Hinges

Tools Needed:

Power Drill

7/16" Socket Driver

NOTE: For door section identification see page 4.

Located the bottom section, (2) #1 hinges for the end stiles and enough #1 hinge(s) for each of the center stile(s).

Place the hinge on the section so that the lower (numbered) leaf of the hinge is over the pre-punched holes in the end stiles and center stile(s) at the top of the section.

Secure the hinges to the section using (2) 1/4"- 14 x 5/8" self tapping screws each.

Insert roller into appropriate end hinge tube.

Repeat for all sections except the top section.

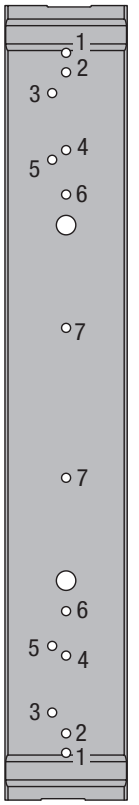
Use (2) #2 end hinge(s) and the required number of #1 hinges for each of the center stile(s) on the lock section (second section).

Use (2) #3 end hinges and the required number of #1 hinges for each of the center stile(s) on the intermediate section (third section).

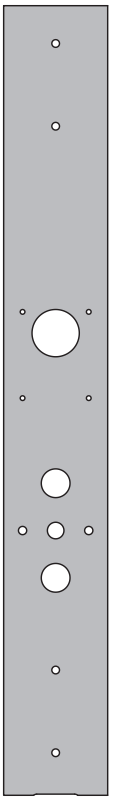
If installing a five section door, use (2) #4 end hinges and the required number of #1 hinges for each of the center stile(s) on the intermediate II section (fourth section).

IMPORTANT: WHEN PLACING ROLLERS INTO END HINGES NUMBER 2 AND HIGHER, THE ROLLER GOES INTO TUBE FURTHEST AWAY FROM SECTION.

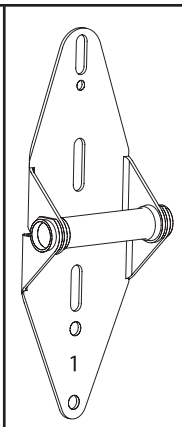
IMPORTANT: ONCE FASTENER IS SNUG AGAINST HINGE LEAF, TIGHTEN AN ADDITIONAL 1/4 TO 1/2 TURN TO RECEIVE MAXIMUM DESIGN HOLDING POWER.



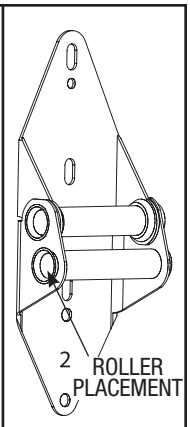
END STILE HOLE PATTERN
(LEFT SIDE IS SHOWN. RIGHT SIDE IS OPPOSITE.)



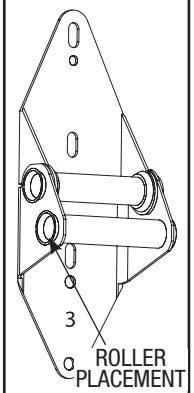
CENTER STILE HOLE PATTERN



#1 HINGE



#2 END HINGE



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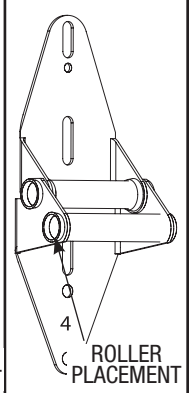
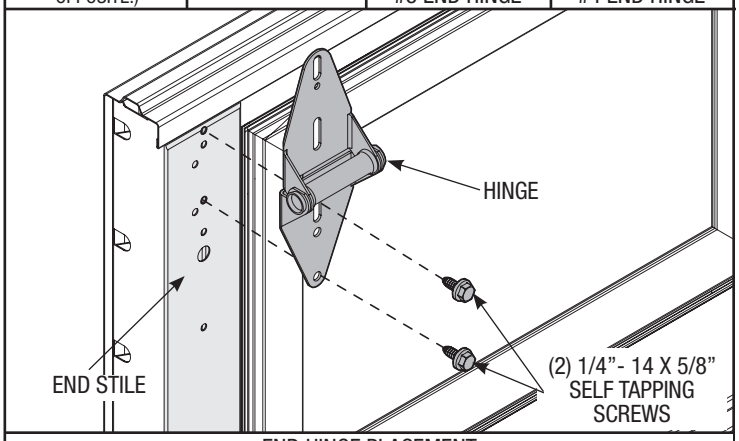
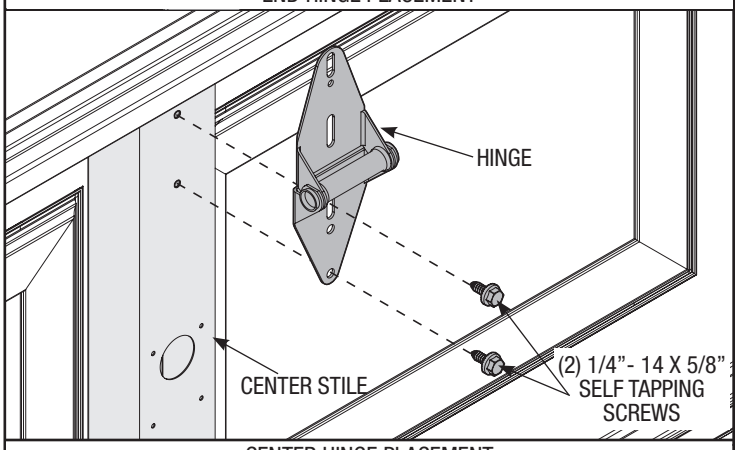


#4 END HINGE



END HINGE PLACEMENT



CENTER HINGE PLACEMENT

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9

Top Bracket

Tools Needed:

Power Drill

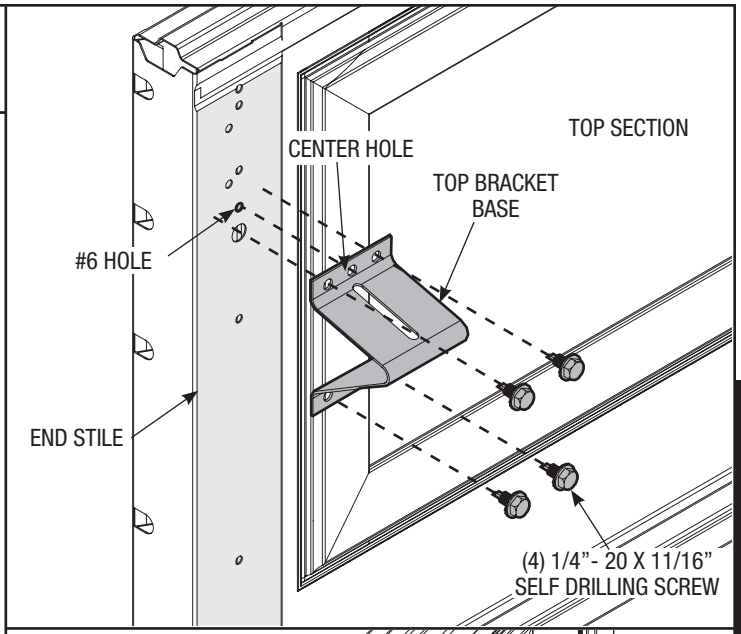
7/16” Socket Driver

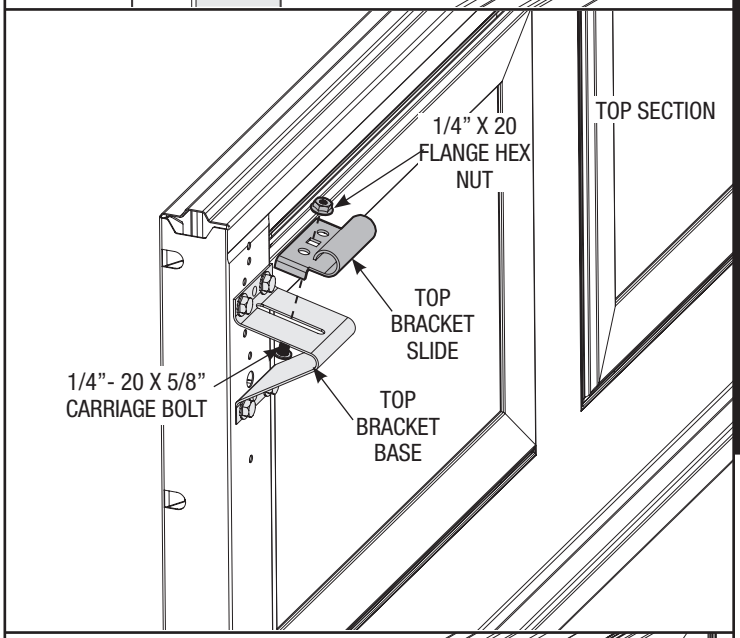
Align upper-center hole of top bracket with #6 hole in the end stile (See End Stile Hole Pattern on page 15). Ensure top bracket is level and aligned with edge of section. Secure with (2) 1/4”- 20 x 11/16” self drilling screws, one in each top corner of the top bracket.

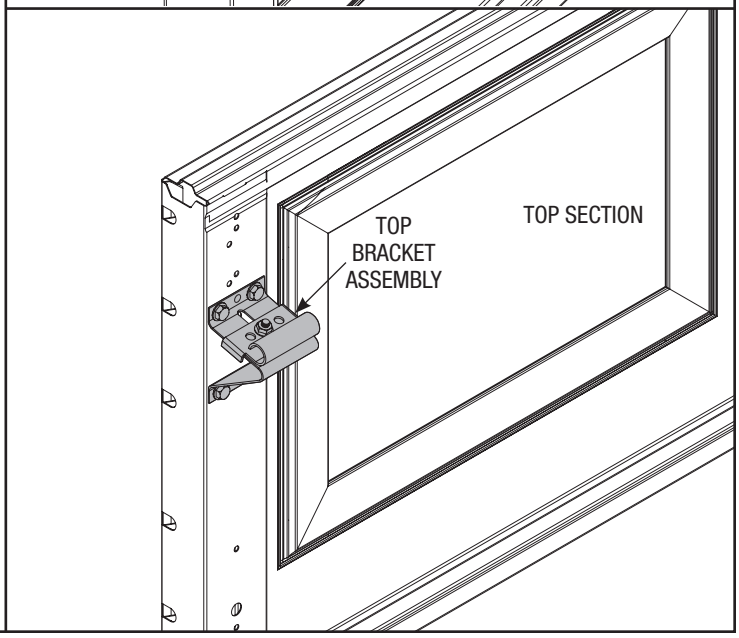
Ensure top bracket is level and aligned with edge of section. Secure with (2) 1/4”- 20 x 11/16” self drilling screws, one in each bottom corner of the top bracket.

Loosely fasten top bracket slide with (1) 1/4”- 20 x 5/8” carriage bolt and (1) 1/4” x 20 flange hex nut. Insert roller. Repeat for other side.

NOTE: For doors with a glazed top section (windows). Top strut may be mounted between #2 and #6 holes before top bracket is installed. See Step 11 for U-Bar installation







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10

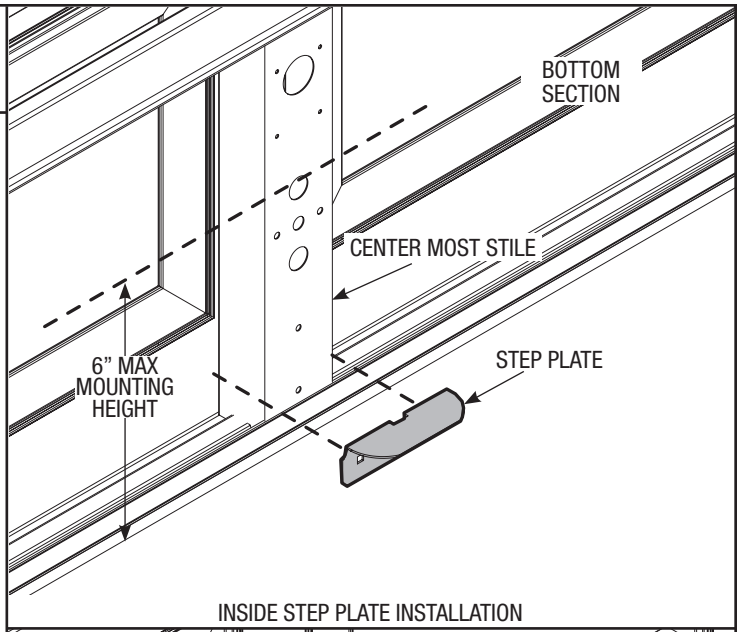
Step Plate

Tools Needed:

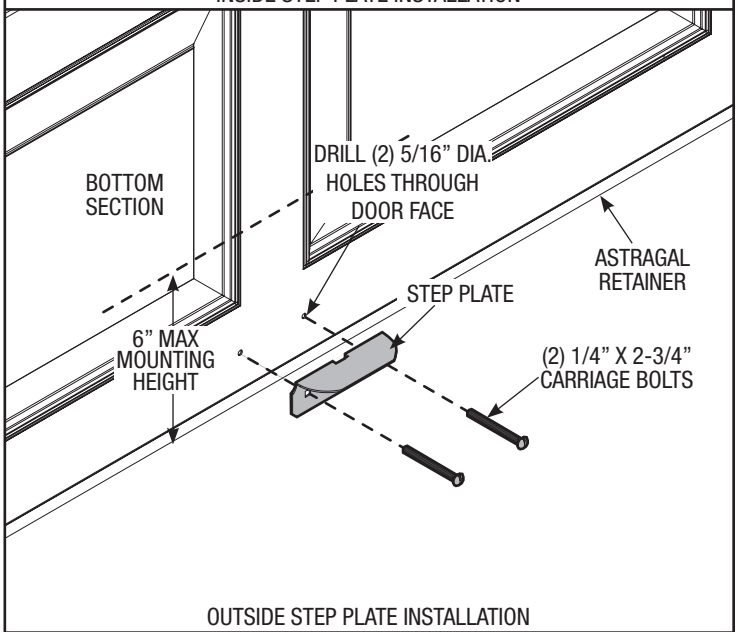
Locate the center most stile of the bottom section of the door.

On the inside of the door, center the step plate/lift handle on the center most stile no higher than 6” from the bottom of the door. Using the step plate/lift handle holes as a guide, drill a 5/16” dia. hole along each side of the stile through the face of the door. (Drill through insulation and door’s face on an insulated door.) Be extremely careful to keep drill straight.

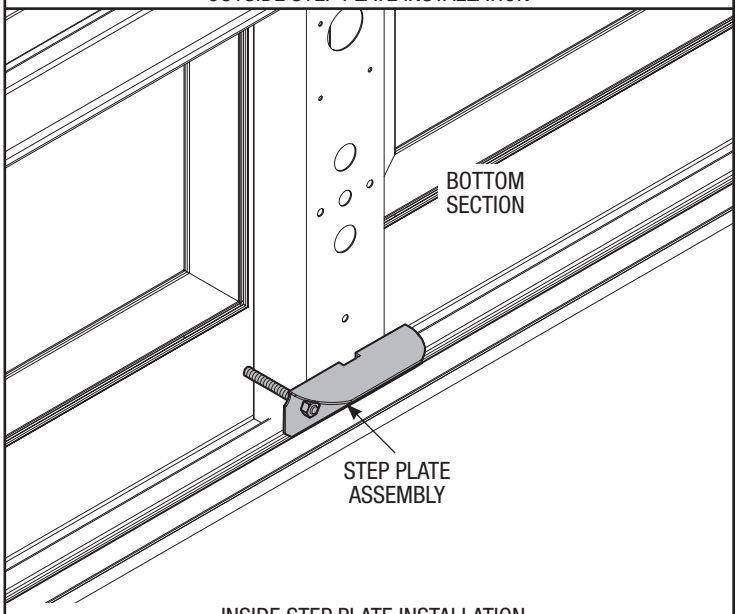
Mount step plates/ lift handles back to back, straddling stile. Secure with (2) 1/4” x 2-3/4” carriage bolts and 1/4”-20 flange hex nuts.



INSIDE STEP PLATE INSTALLATION


BOTTOM SECTION
DRILL (2) 5/16” DIA. HOLES THROUGH DOOR FACE
ASTRAGAL RETAINER
STEP PLATE
6” MAX MOUNTING HEIGHT
(2) 1/4” X 2-3/4” CARRIAGE BOLTS

OUTSIDE STEP PLATE INSTALLATION



INSIDE STEP PLATE INSTALLATION

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11

U-Bar

Tools Needed:
Power Drill

7/16” Socket Driver

NOTE: U-Bars are required on all doors 14’ wide and over.

NOTE: All U-Bars are placed at the top of the section.

NOTE: The intermediate I section is the third section from the bottom on a 5 section door. The intermediate II section is the fourth section from the bottom on a 5 section door.

NOTE: For doors 16’1” to 18’0” that have a glazed section, the U-bar needs to be placed on the Intermediate section instead of the Lock section on a 4 section door. On a 5 section door the U-bar needs to be placed on the Intermediate II section instead of the Intermediate I section.

INSTALLATION ON THE TOP SECTION:

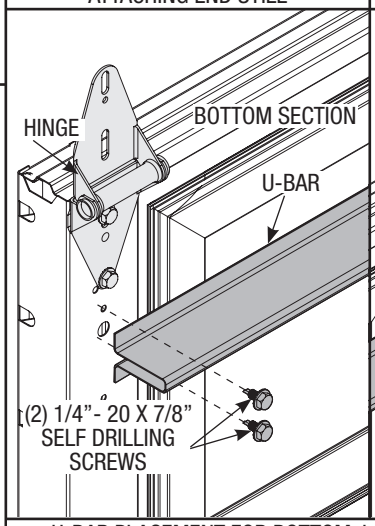
Doors 14’ wide and over, locate U-Bar above top bracket and secure with (2) 1/4”- 20 x 7/8” self drilling screws at each end and center stile location.

INSTALLATION ON ALL OTHER SECTIONS:

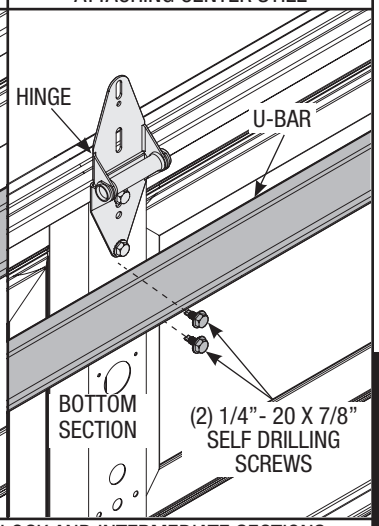
NOTE: All WayneMark™ 8200 doors 14’- 0” to 16’- 0” wide, 6’- 0” to 7’- 0” high (4 section high only) are now supplied with a 2” U-Bar for the top of the bottom section.

Place the U-Bar on the section against the bottom of the hinges. Center the U-Bar side to side on the section at the location shown, and secure to the section using (2) 1/4”- 20 x 7/8” self drilling screws at each end and center stile location.

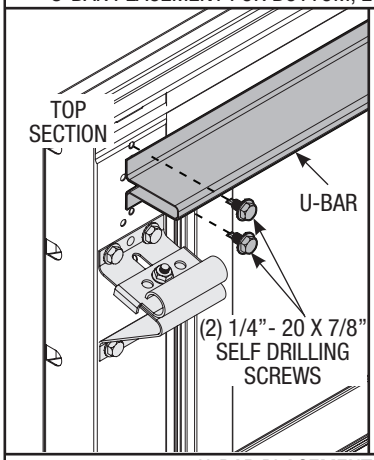
ATTACHING END STILE

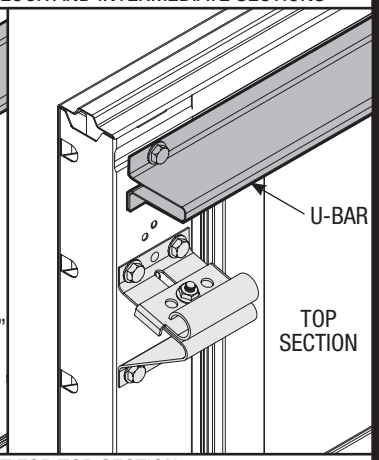


ATTACHING CENTER STILE

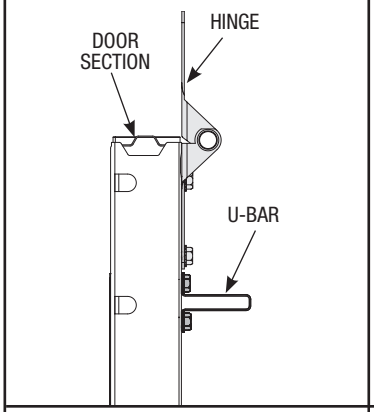


U-BAR PLACEMENT FOR BOTTOM, LOCK AND INTERMEDIATE SECTIONS

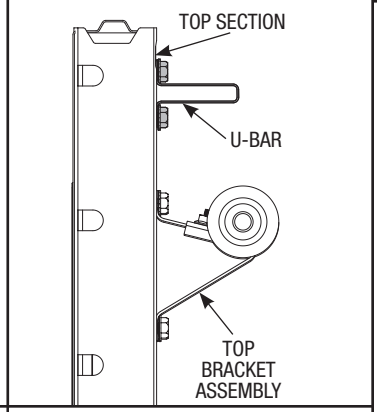




U-BAR PLACEMENT FOR TOP SECTION



SIDE PROFILE



U-BAR PLACEMENT FOR TOP SECTION

8000 Series U-Bar Schedule		
Door Width	**4 Section**	**5 Section**
8’- 0” to 13’- 11”	N/A	N/A
14’- 0” to 16’- 0”	**(1) 2” U-Bar** Top Section	**(2) 2” U-Bars** Top & Bottom Sections
16’- 1” to 18’- 0”	**(3) 2” U-Bars** Top, Bottom & Lock Sections	**(3) 2” U-Bars** Top, Bottom & Intermediate 1 Sections
18’- 1” to 20’- 0”	**(4) 3” U-Bars** All Sections	**(5) 3” U-Bars** All Sections

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12

Bottom Section

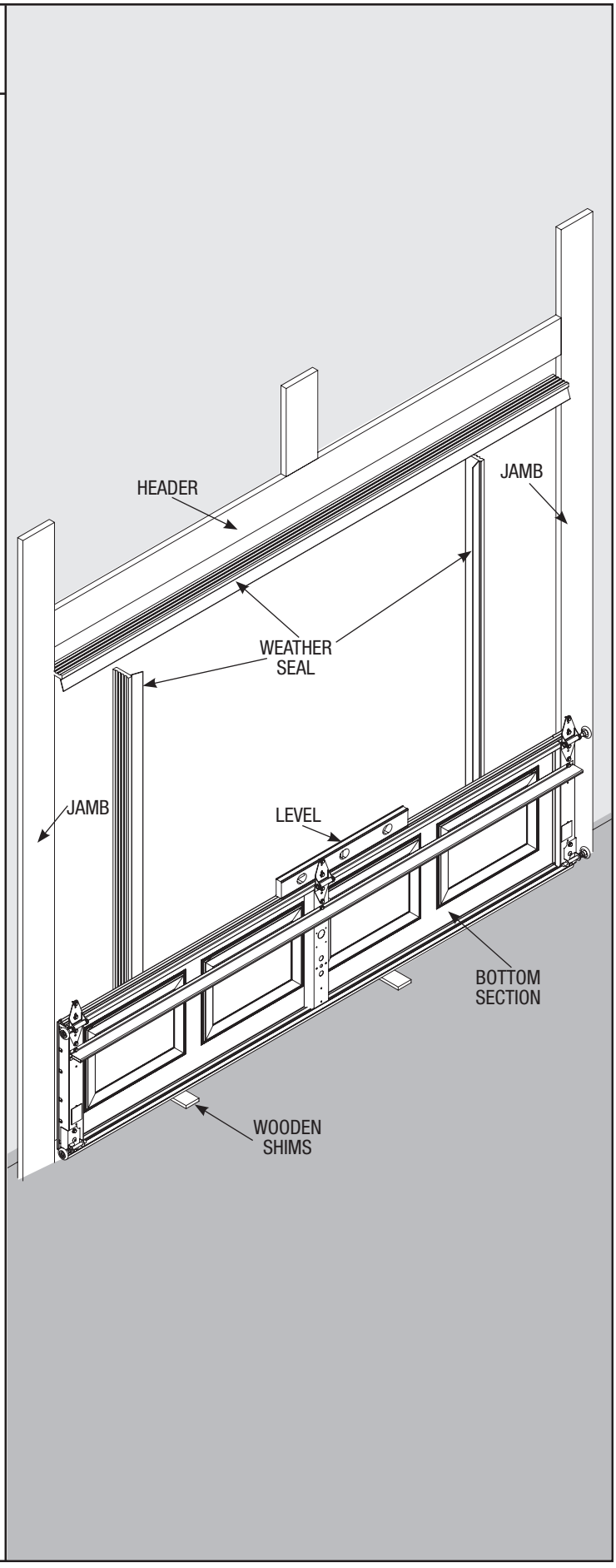
Tools Needed:

Hammer

Wood Shims

Before installing the bottom section, the weather seal (may not be included) must be installed (see PREPARING THE OPENING on page 10)

Center the bottom section in the door opening. Level section using wooden shims under the bottom astragal if necessary. Hold the section in the opening while attaching vertical tracks.



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13

Vertical Track

Tools Needed:

3/16” Drill Bit

Power Drill

7/16” Socket Driver

Tape Measure

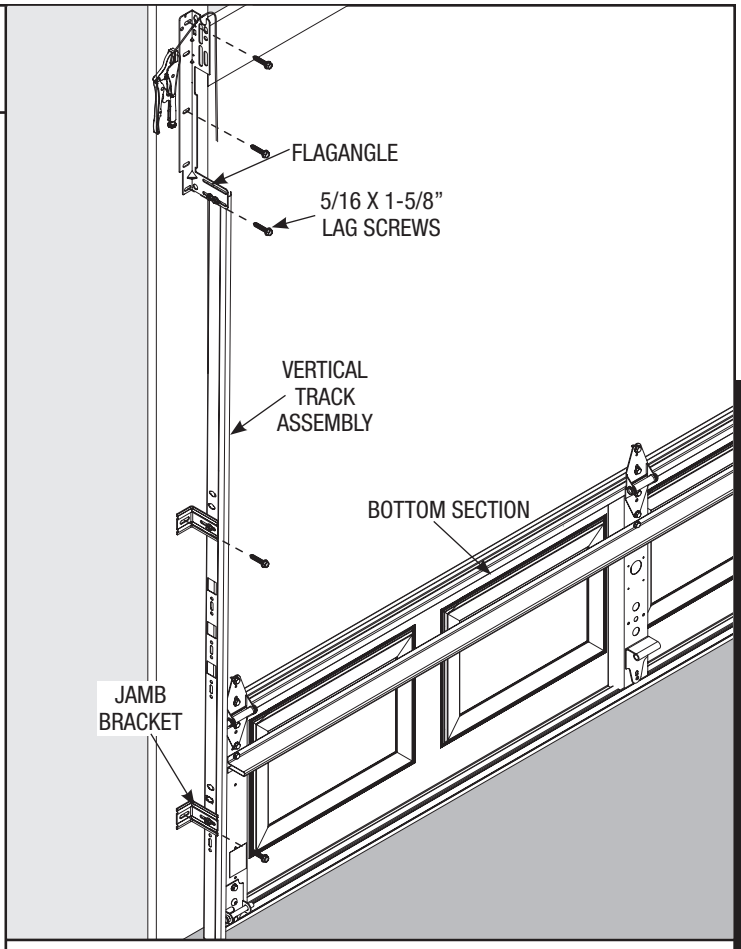
Level

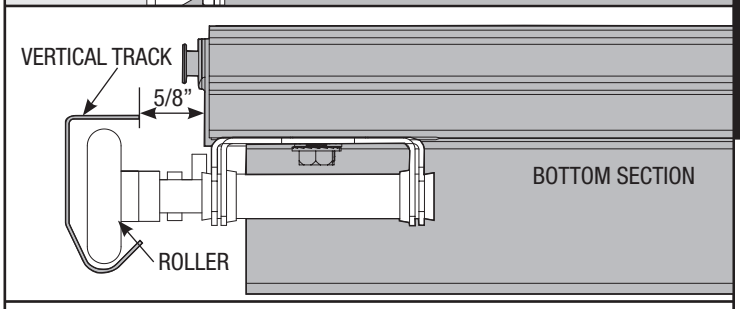
IMPORTANT: THE TOPS OF THE VERTICAL TRACKS MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT. THE VERTICAL TRACK ON THE SHIMMED SIDE, MUST BE RAISED THE HEIGHT OF THE SHIM.

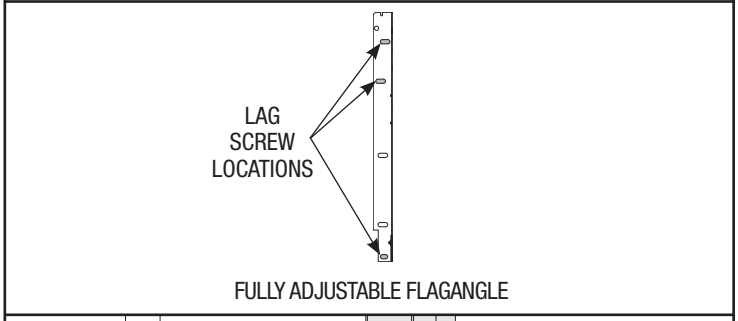
Position the left hand vertical track assembly over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Drill 3/16” pilot holes for the lag screws.

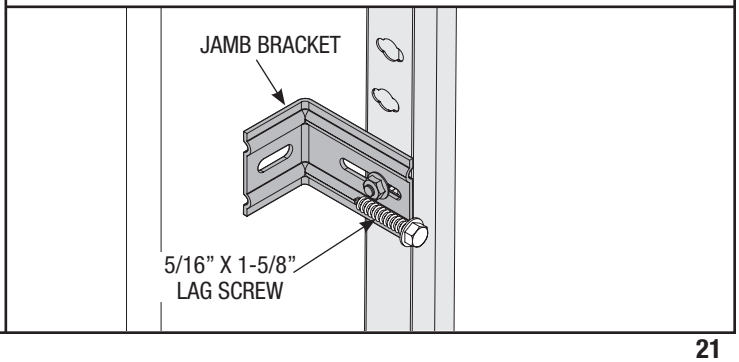
Install the track so that it is aligned with the bottom of the door.

Secure jamb brackets and flagangles to the jamb using 5/16 x 1-5/8” lag screws. Hang counterbalance cable over flagangle. Repeat for the right side.









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14

Stacking Sections

Tools Needed:

Power Drill

7/16” Socket Driver

NOTE: For door section identification see page 4.

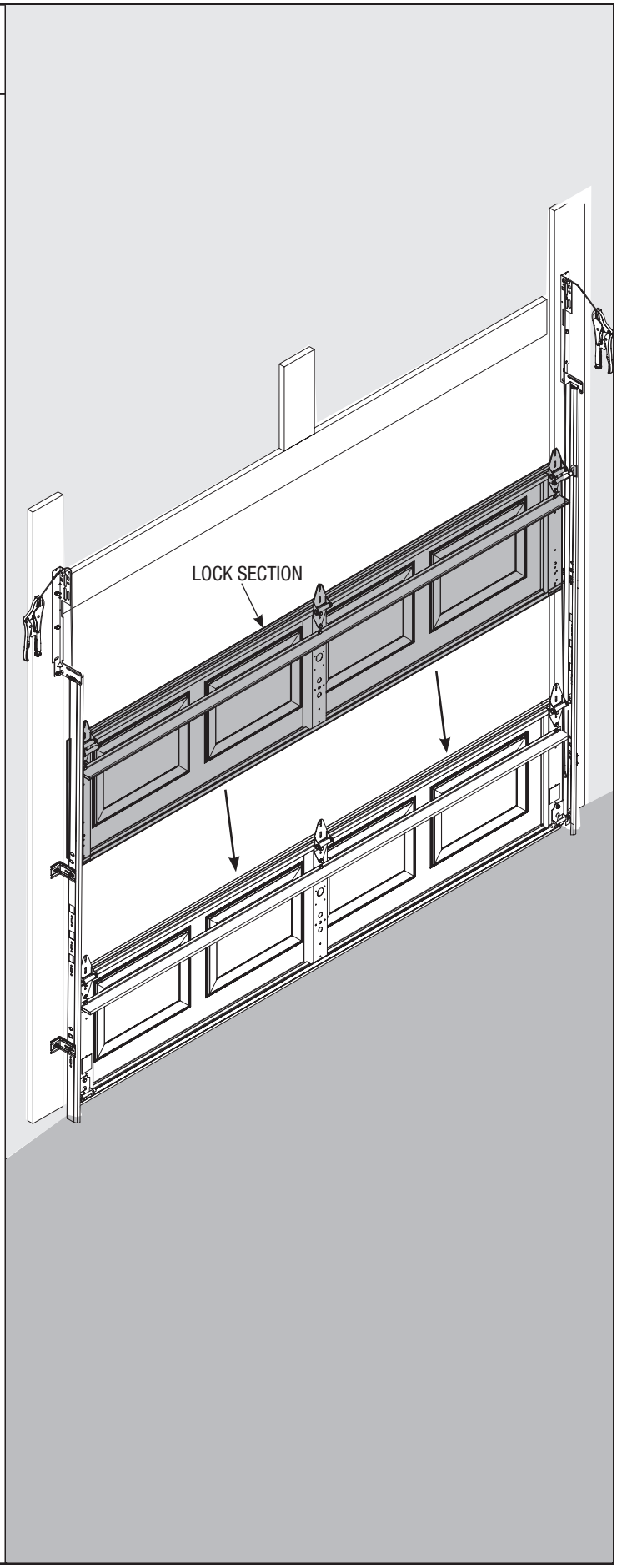
NOTE: Make sure hinges are flipped down, when stacking another section on top.

With assistance, lift second section and guide rollers into the vertical tracks. Keeping the ends of the sections aligned, install remaining section(s), except top section, in same manner.

Now flip up hinge leaf, hold tight against section, and fasten center hinges first, and end hinges last, using (2) 1/4”- 14 x 5/8” self tapping screws. Repeat for other section(s) except top section.

IMPORTANT: PUSH & HOLD THE HINGE LEAF AGAINST SECTION WHILE SECURING WITH 1/4”- 14 X 5/8” SELF TAPPING SCREWS.

NOTE: Install lock at this time (sold separately) see instructions in OPTIONAL SIDELOCK INSTALLATION on page 32.



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15

Top Section

Tools Needed:
Hammer

Nail

Power Drill

7/16 Socket Driver

Tape Measure

Place the top section in the opening and vertically align with lower sections.

Temporarily secure the top section by driving a nail in the header near the center of the door and bending it over the top section.

Now flip up hinge leaf against section, fastening center hinges first, and end hinges last. (Refer to Step 6).

When installing a door with a torsion counterbalance system, vertical track alignment is critical. Position flagangle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door. Tighten the bottom lag screw. Flagangles must be parallel to the door sections.

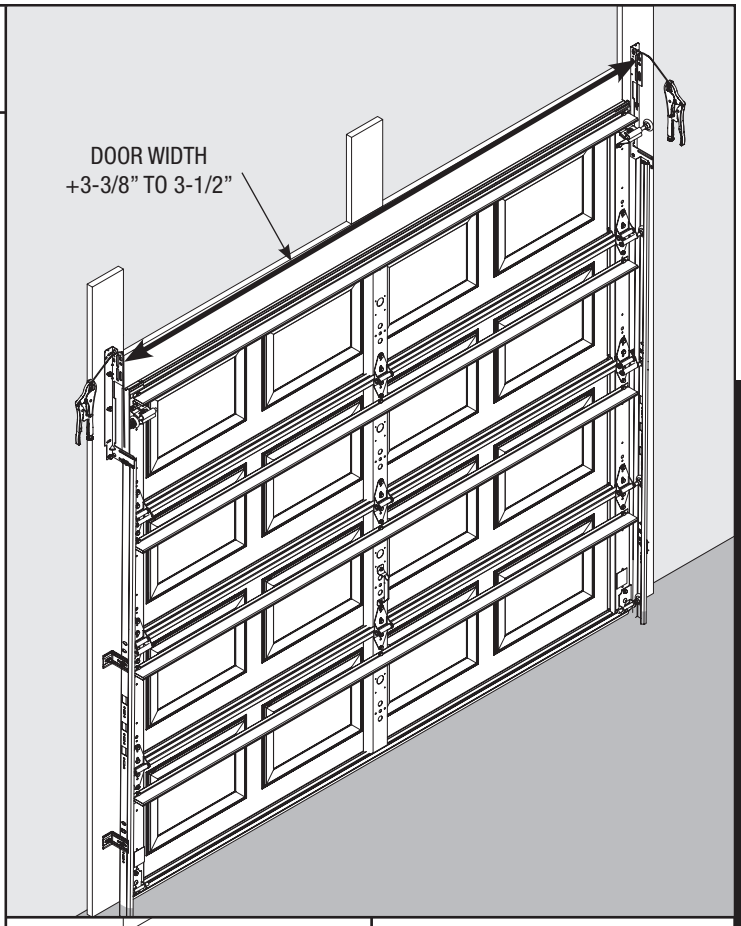
Repeat for opposite side.

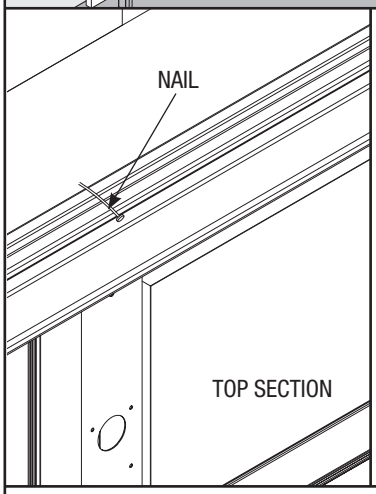
IMPORTANT: THE DIMENSION BETWEEN THE FLAGANGLES MUST BE DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

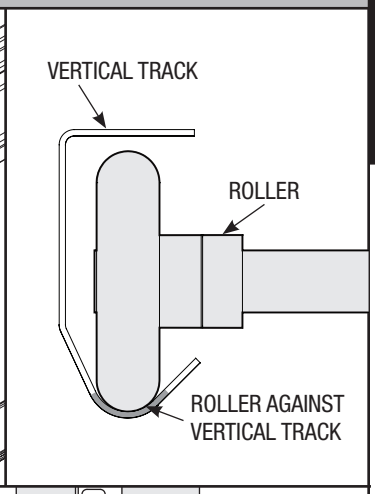
Complete the vertical track installation by securing the center jamb bracket(s) and tightening the other lag screws.

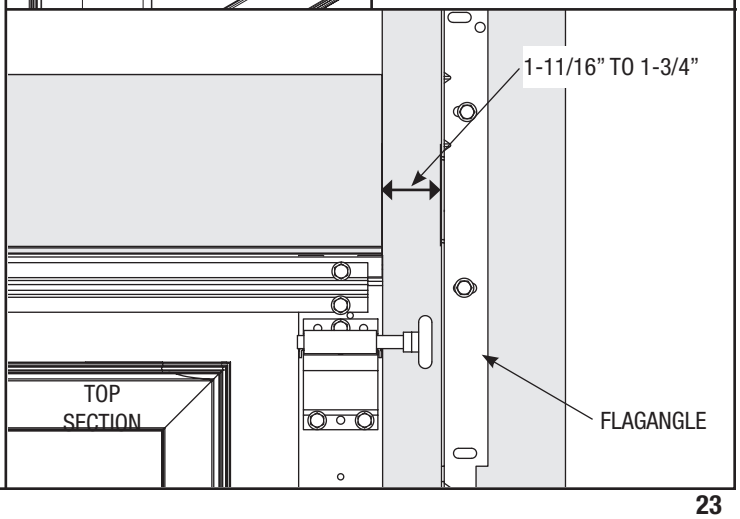
Push the vertical track against the rollers so that the rollers are touching the deepest part of the curved side of the track (see illustration). Tighten all the carriage bolts and nuts.

Repeat for opposite side.









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16

Attaching Adjustable Flagangle to Horizontal Track

Tools Needed:

9/16” Socket

7/16” Socket

Ratchet Wrench

9/16” Wrench

Level

Hammer

Flat Tip Screwdriver

NOTE: If you have quick install flagangle, skip this step and complete Step 17.

Align the bottom of the horizontal track with the vertical track. Hand tighten the horizontal track to the flagangle with (2) 1/4”- 20 x 9/16” large head ribbed track bolts and (2) 1/4”- 20 flange hex nuts.

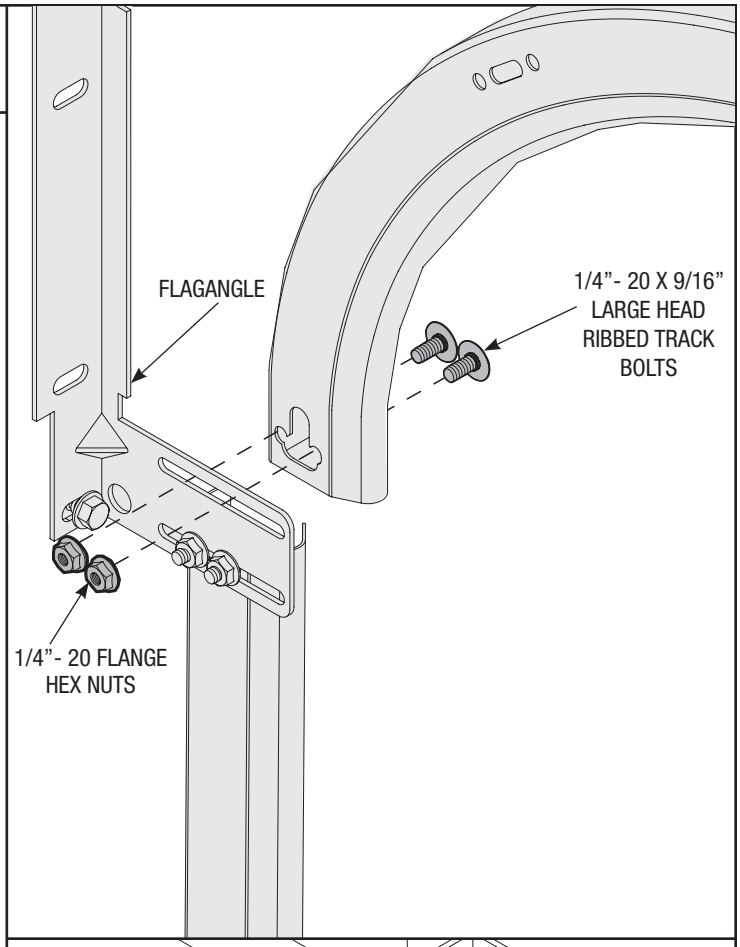
⚠ WARNING

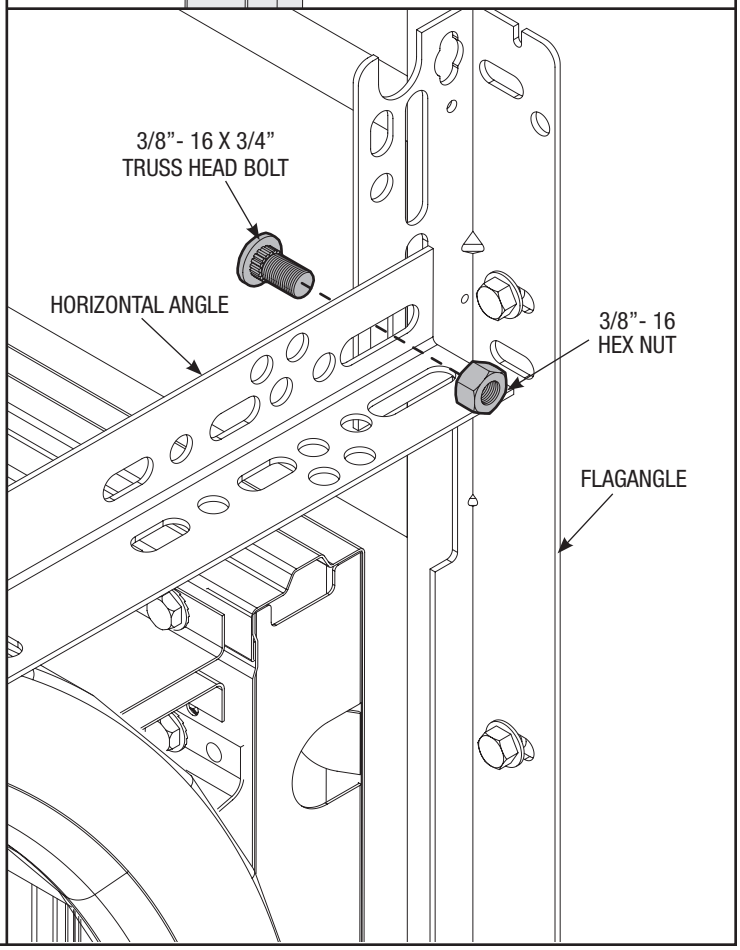
DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP 20, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

Level the horizontal track assembly and bolt the horizontal angle to the slot in the flagangle using (1) 3/8”- 16 x 3/4” truss head bolt and (1) 3/8”- 16 hex nut. Repeat for other side. Remove the nail that was temporarily holding the top section in place, installed in Step 15.

IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.

NOTE: After completing this step, continue with Step 18.





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17

Attaching Quick Install Flagangle to Horizontal Track

Tools Needed:

9/16” Socket

Ratchet Wrench

9/16” Wrench

Level

Hammer

NOTE: If quick install flagangle was installed in Step 16, skip this step and continue with Step 18. If not, complete this step.

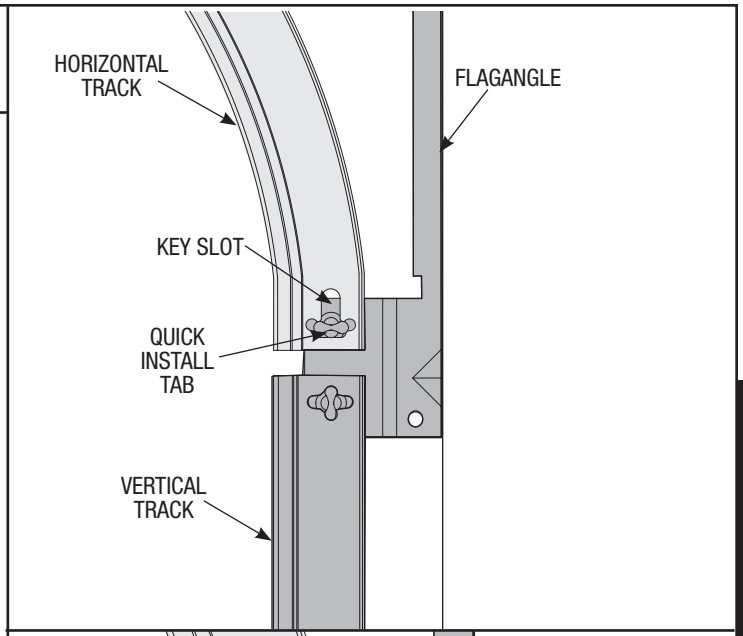
Align key slot of the horizontal track with the quick install tab of the flagangle. Push curved portion of horizontal track down to lock in place.

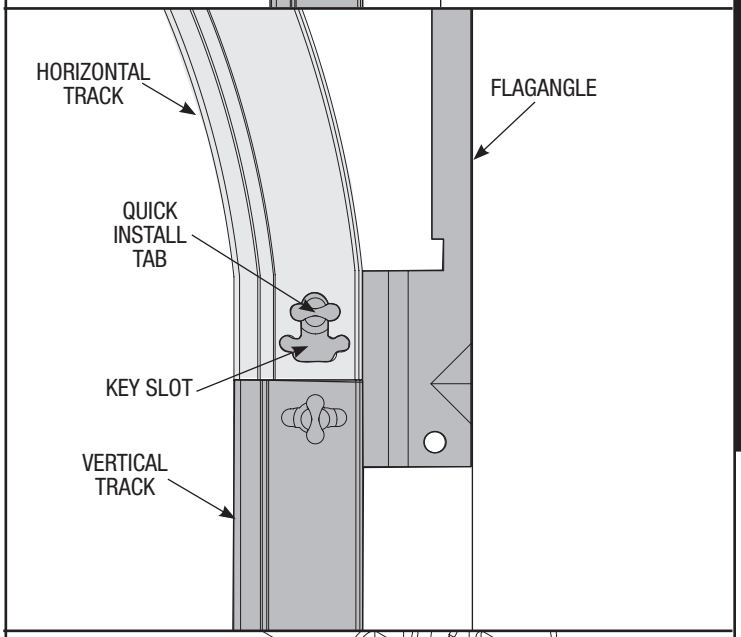
⚠ WARNING

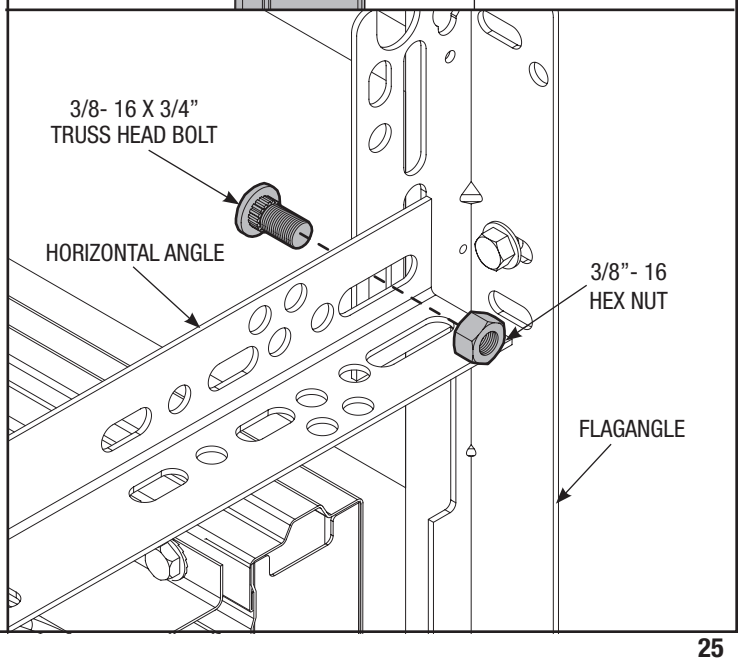
DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP 20, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

Level the horizontal track assembly and bolt the horizontal angle to the slot in the flagangle using (1) 3/8”- 16 x 3/4” truss head bolt and (1) 3/8”- 16 hex nut. Repeat for other side. Remove the nail that was temporarily holding the top section in place, installed in Step 15.

IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.







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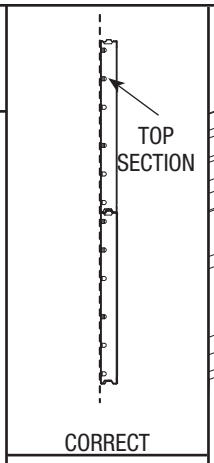
18

Adjusting Top Brackets

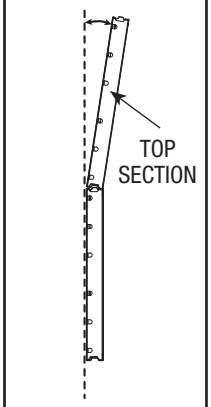
Tools Needed:

7/16” Wrench

With tracks installed you can adjust the top brackets. Vertically align the top section with the lower sections. Once aligned, position top roller in adjustable slide against horizontal track to maintain position and tighten nut. Repeat for other side.



CORRECT



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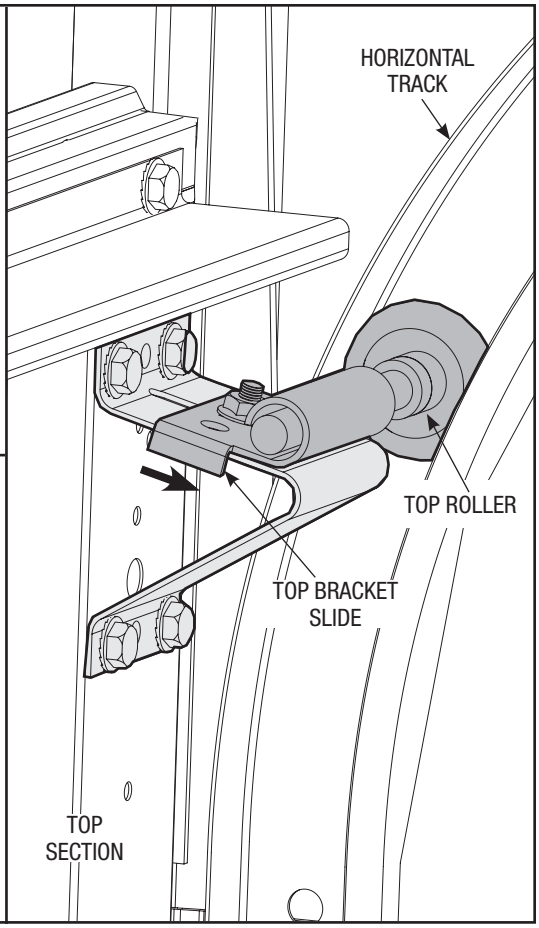


19

Lift Handle

Tools Needed:

Tape Measure

Pencil

Power Drill

9/32” Drill Bit

1/2” Drill Bit

1/4” Wrench

NOTE: Doors with Keyed lock do not require this lift handle.

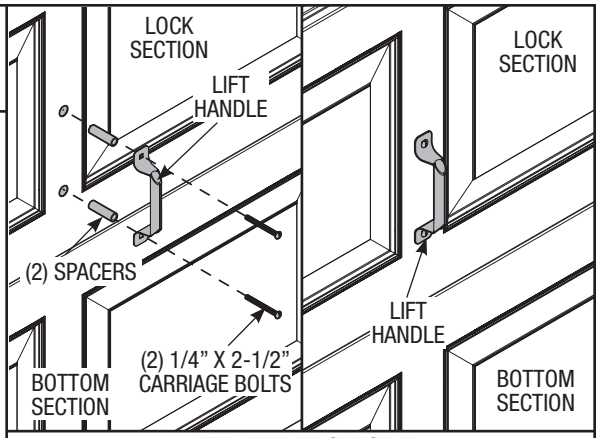
Raise the door to a comfortable working height and secure with vice clamp to the track. Locate the inside center stile or the desired lift handle location on the lock (2nd) section of the door.

Measure up 4 inches from the bottom of the second section. Using this measurement as a guide, position lift handle bottom hole and make a mark at the top hole in lift handle. This should give you a Min. of 20 in. and a Max. of 30 in. between the lower lift handle/gripping point and the middle of the upper lift handle/gripping point. If needed reposition upper lift handle to stay within Min. and Max. dimension.

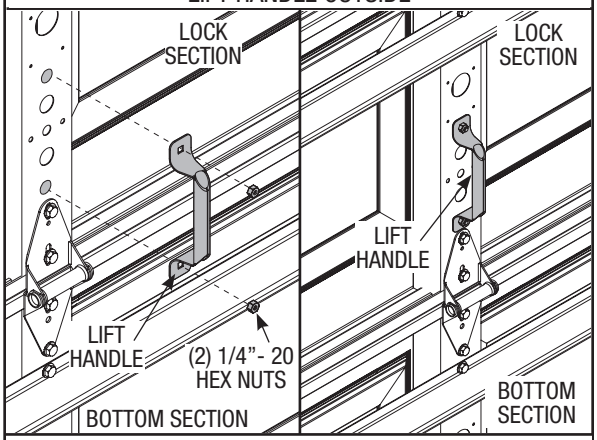
Drill two 9/32 in. (8mm) dia. holes through section. Enlarge the holes from outside the door to 1/2” (13mm) dia.

NOTE: Do not drill through or enlarge holes on the inside of the door.

Assemble the outside and inside lift handle/gripping points to the section using (2) 1/4” x 2 1/2” carriage bolts, (2) 1/4”- 20 hex nuts and (2) spacers.



LIFT HANDLE OUTSIDE



LIFT HANDLE INSIDE

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20

Rear Supports

Tools Needed:

⚠ WARNING

KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL FROM THE HORIZONTAL POSITION, RESULTING IN SEVERE INJURY OR DEATH.

Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since the horizontal tracks are not yet supported at the rear.

⚠ WARNING

RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.

Clamp a pair of vice clamps on each of the vertical tracks just below the bottom roller on both sides of the door. This will prevent the door from lowering while installing the rear support.

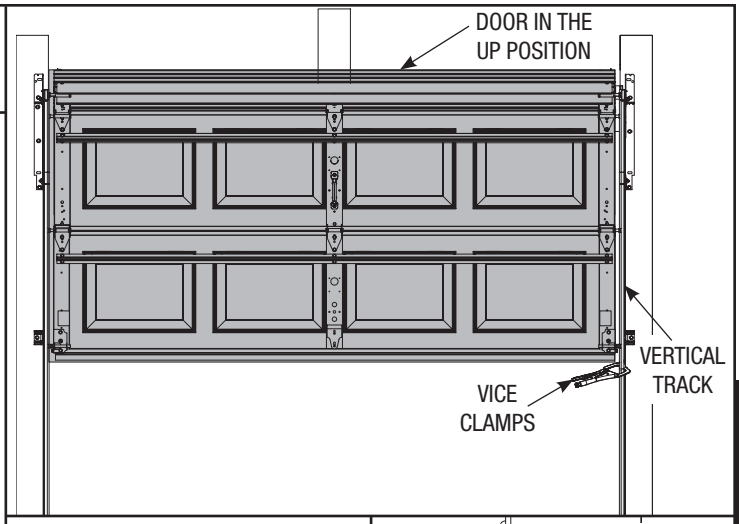
Using perforated angle, 5/16" x 1-5/8" hex head lag screws and 5/16" bolts with nuts (may not be supplied), fabricate rear supports for horizontal tracks.

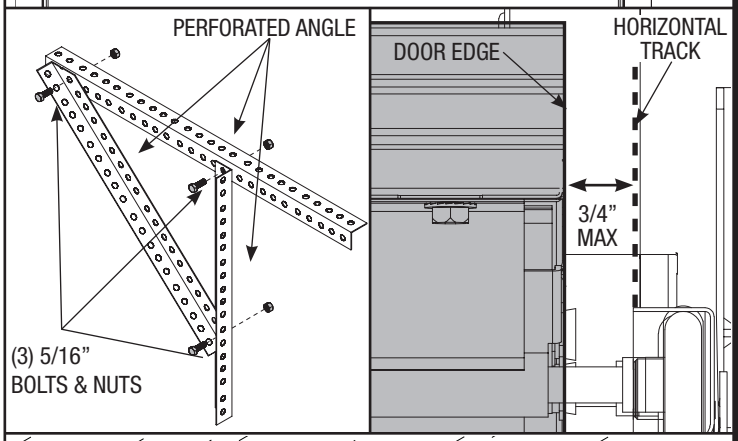
Attach horizontal tracks to the rear supports with 5/16"-18 x 1-1/4" hex bolts and nuts (may not be supplied). The bolt should extend into the track to act as a roller stop. Horizontal tracks must be level and parallel with door.

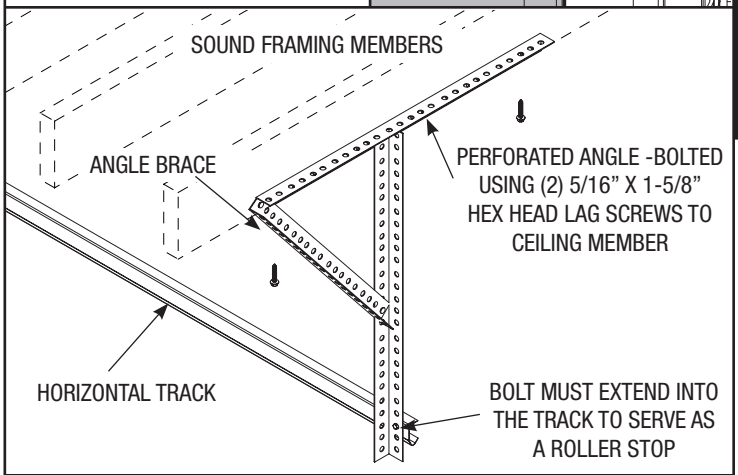
NOTE: If rear supports are to be installed over drywall, use 5/16" x 2" hex head lag screws.

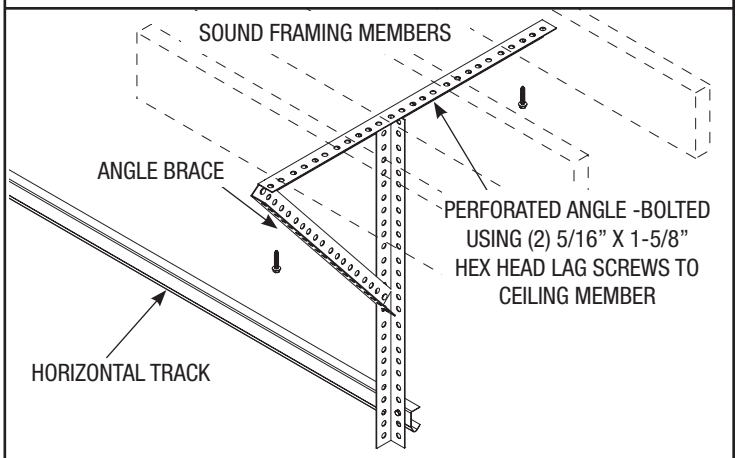
⚠ WARNING

REAR SUPPORTS MUST BE SECURELY ATTACHED TO SOUND FRAMING MEMBERS, OR DOOR COULD FALL FROM HORIZONTAL POSITION, RESULTING IN SEVERE OR FATAL INJURY.






SOUND FRAMING MEMBERS
ANGLE BRACE
PERFORATED ANGLE -BOLTED USING (2) 5/16" X 1-5/8" HEX HEAD LAG SCREWS TO CEILING MEMBER
HORIZONTAL TRACK
BOLT MUST EXTEND INTO THE TRACK TO SERVE AS A ROLLER STOP


SOUND FRAMING MEMBERS
ANGLE BRACE
PERFORATED ANGLE -BOLTED USING (2) 5/16" X 1-5/8" HEX HEAD LAG SCREWS TO CEILING MEMBER
HORIZONTAL TRACK

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21

Attaching Front Sheaves

Tools Needed:

Using (1) 3/8” - 16 hex nut, attach the front steel sheave in the appropriate hole (left hand shown).

3” STEEL SHEAVE WITH 12” RADIUS TRACK:

Bolt the sheave to the 13/32” hole near the top of the flagangle.

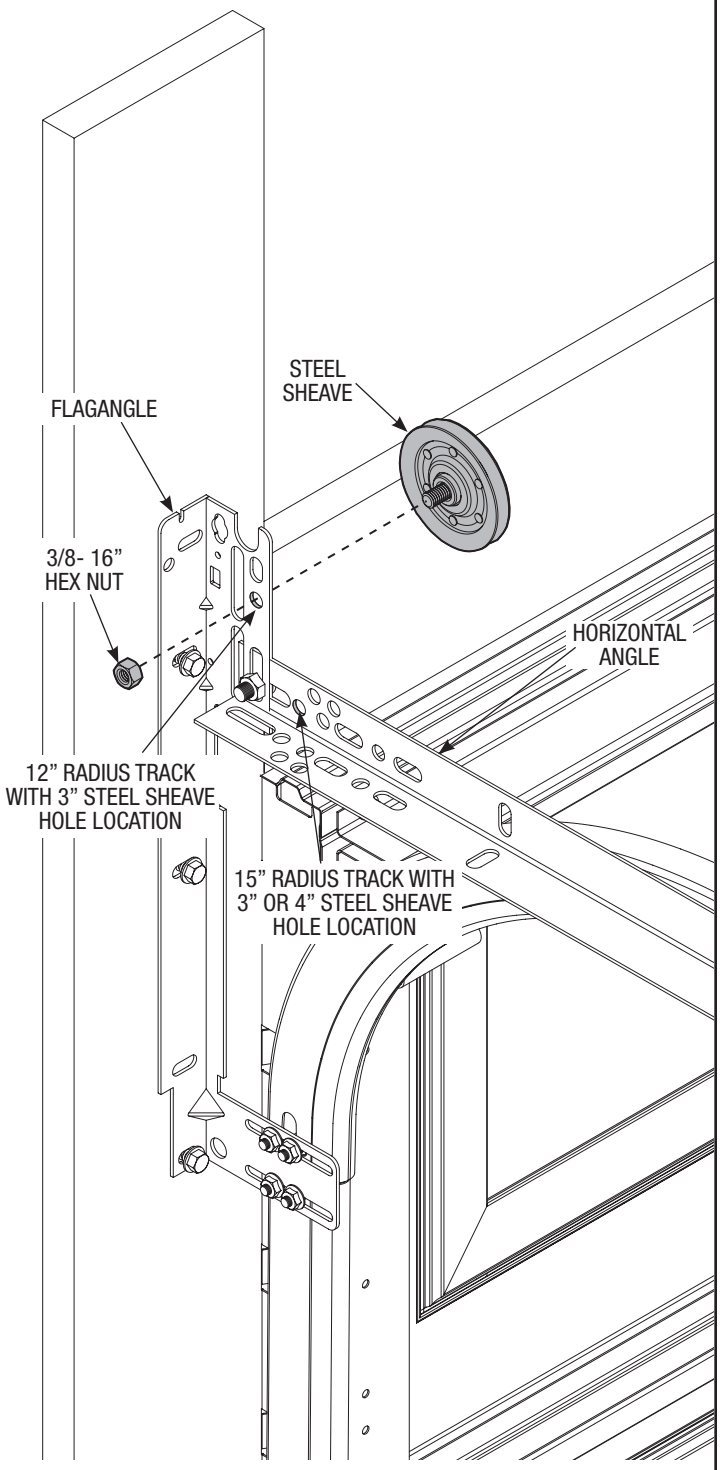
3” OR 4” STEEL SHEAVE WITH 15” RADIUS TRACK:

Bolt the sheave to the first 13/32” hole in the horizontal angle.

Repeat for other side.

Remove the locking pliers from the vertical tracks. With assistance, raise the door slowly into the open position making sure the door travels smoothly through the track.

Clamp locking pliers to the back leg of both horizontal tracks, below the bottom rollers to keep the door from lowering.


STEEL SHEAVE
FLAGANGLE
3/8- 16” HEX NUT
HORIZONTAL ANGLE
12” RADIUS TRACK WITH 3” STEEL SHEAVE HOLE LOCATION
15” RADIUS TRACK WITH 3” OR 4” STEEL SHEAVE HOLE LOCATION

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22

Attaching Extension Springs

Tools Needed:

Position the (1) 5/16” - 18 x 3-3/4” eyebolt and (1) 5/16” - 18 hex nut in the rear support, 6” to 8” above the horizontal track.

Feed the snubber cable through the rear support and tie the special knot around the “room side” of the 3 hole clip as shown.

Secure the eyebolt and clip to the rear support with (1) 5/16” - 18 hex nut.

Hook one end of the extension spring onto the eyebolt.

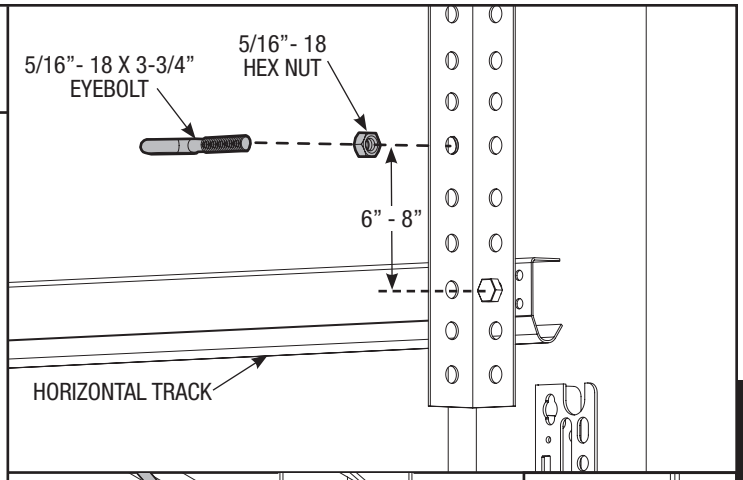
Feed the snubber cable through the end spring loop and center of the extension spring then front spring loop, pull the snubber cable taut and tie the special knot around the “jamb side” of the 3 hole clip.

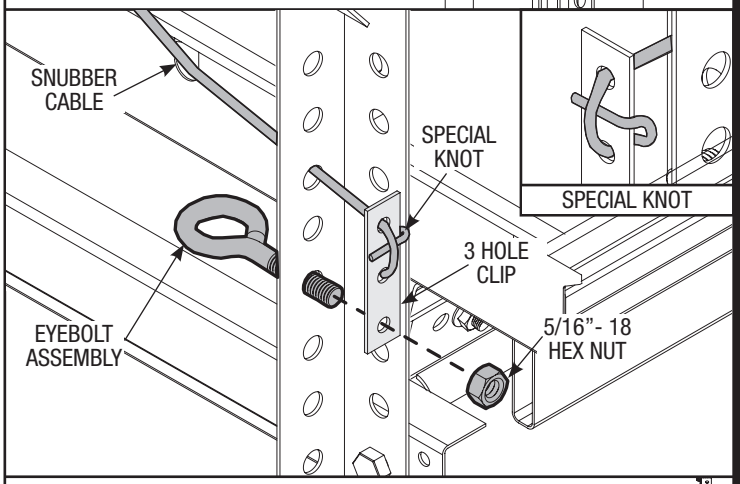
Attach the “jamb side” 3 hole clip to the jamb near the flagangle with (1) 5/16” x 1-5/8” lag bolt.

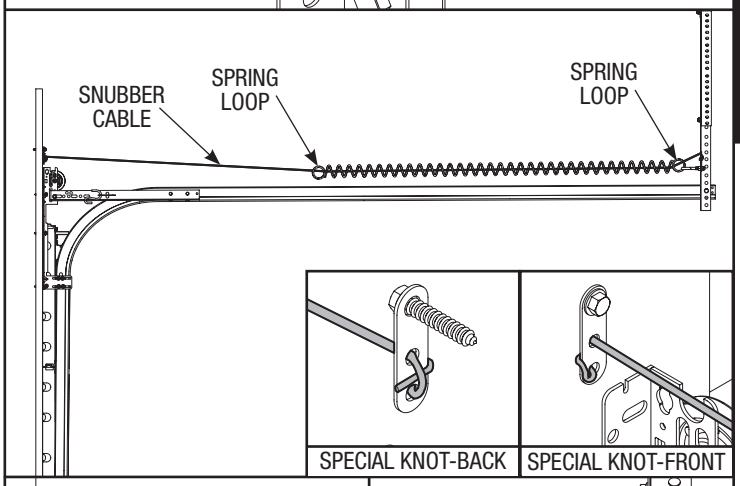
NOTE: Snubber cables must be taut.

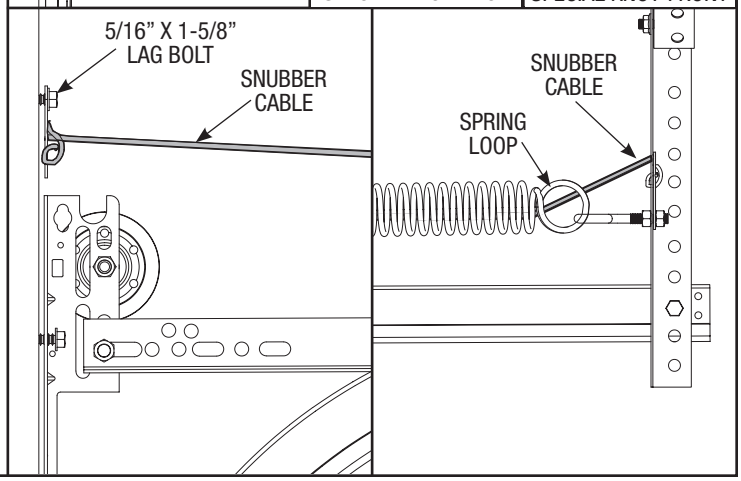
⚠ WARNING

FAILURE TO INSTALL SNUBBER CABLES CAN RESULT IN SEVERE INJURY OR DEATH IN CASE OF SPRING BREAKAGE.









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23

Attaching Spring Sheaves

Tools Needed:

Hook the sheave fork through the front loop of the extension spring and attach the sheave fork to the rear 3" steel sheave using (1) 3/8" -16 x 1-1/4" hex head bolt and (1) 3/8"-16 hex nut.

Thread the counterbalance cable over the front sheave, around the spring sheave and tie the special knot around the "horizontal angle" 3 hole clip.

Insert one end of the large "S" hook in the "horizontal angle" 3 hole clip and the other end in the second slot of the horizontal angle.

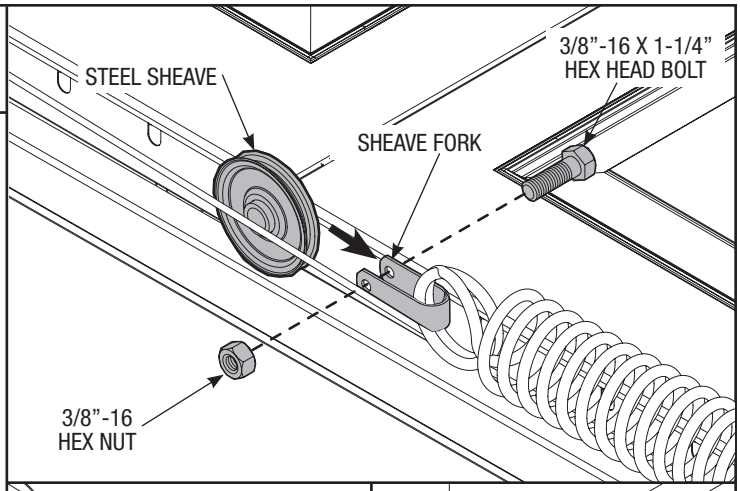
Repeat for the other side.

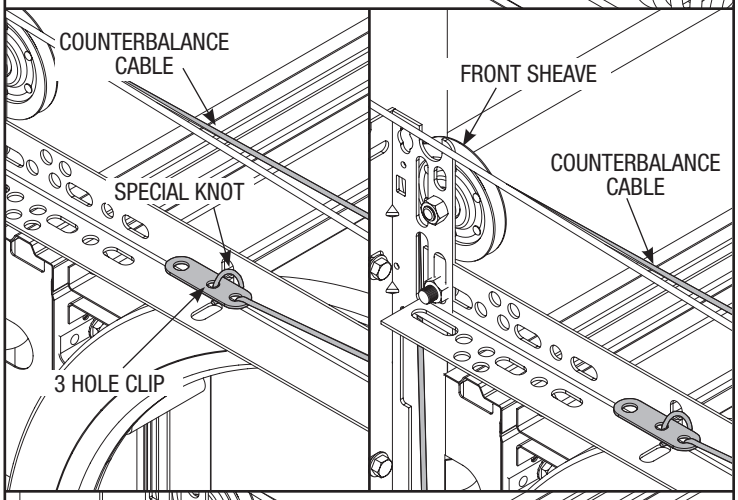
IMPORTANT: Close "S" hooks and eye bolts to prevent springs from coming loose.

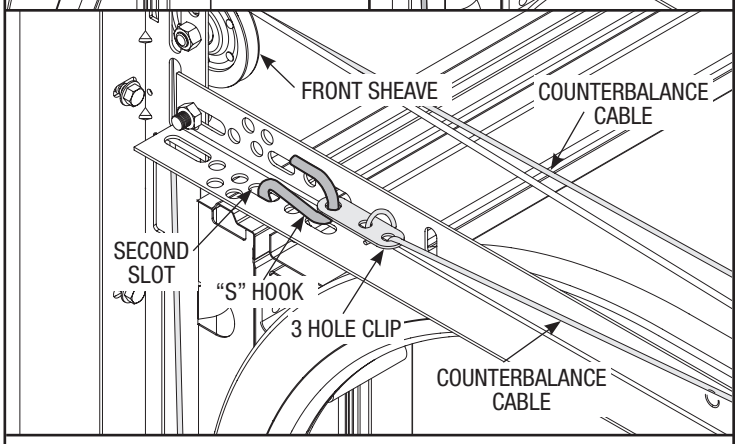
⚠ WARNING

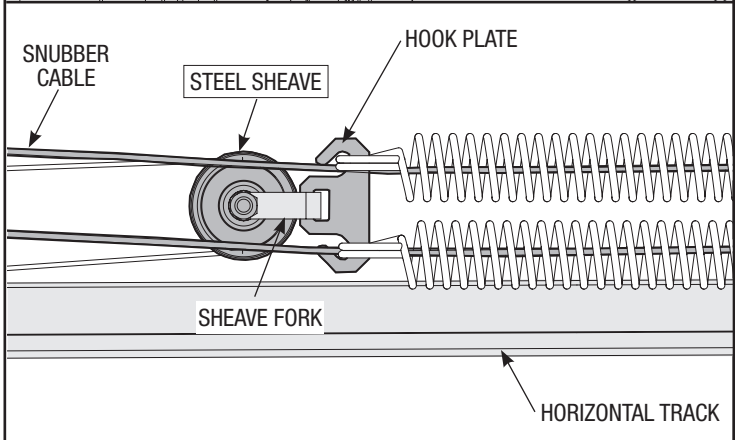
FAILURE TO CLOSE "S" HOOKS AND EYE BOLTS CAN RESULT IN SEVERE INJURY OR DEATH IN CASE SPRINGS COME LOOSE.

NOTE: Some larger doors feature 2 pairs of extension springs. A snubber cable must be installed through each spring









DOOR FEATURING 2 PAIRS OF EXTENSION SPRINGS

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24 Counterbalance Cable Adjustment

Tools Needed:

Adjust counterbalance cables to create about 1” to 2” (25 mm to 50 mm) of inital spring stretch, with door in the fully open position.

Measure relaxed spring length for your door height and verify with chart. Spring length must be the same for both springs to allow even door balance.

Carefully remove the locking pliers from the horizontal track and lower the door into the closed position.

Once the door is closed, measure the spring length in tension for both sides. Using the chart, verify the spring length in tension is correct with your door height.

NOTE: It may be necessary to adjust spring length for proper door balance.

EXTENSION SPRING LENGTH CHART		
Door Height	**Spring Length Relaxed** (Door Open)	**Spring Length Extended** (Door Closed)
6’-6”	25” - 27” (635 mm - 686 mm)	64” - 66” (1626 mm - 1676 mm)
7’-0”	25” - 27” (635 mm - 686 mm)	67” - 69” (1702 mm - 1753 mm)
7’-6”	27” - 29” (686 mm - 737 mm)	72” - 74” (1829 mm - 1880 mm)
8’-0”	27” - 29” (686 mm - 737 mm)	75” - 77” (1905 mm - 1956 mm)

25 Final Adjustments

Tools Needed:

Permanently attach the vinyl weather stripping to both door jambs and the header.

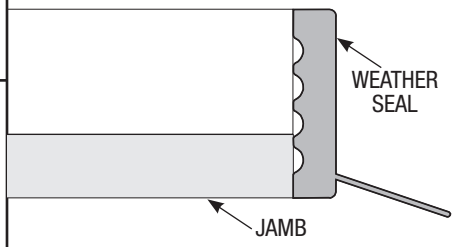
Now lift the door and check it’s balance. If the door is hard to pull down or lifts by itself, adjust spring length by moving the “S” hook backward (towards the rear support) to a different hole in the reinforcing angle.

If the door is difficult to lift or too easy to pull down, adjust spring length by moving the “S” hook forward (towards the header) to a different hole in the reinforcing angle.

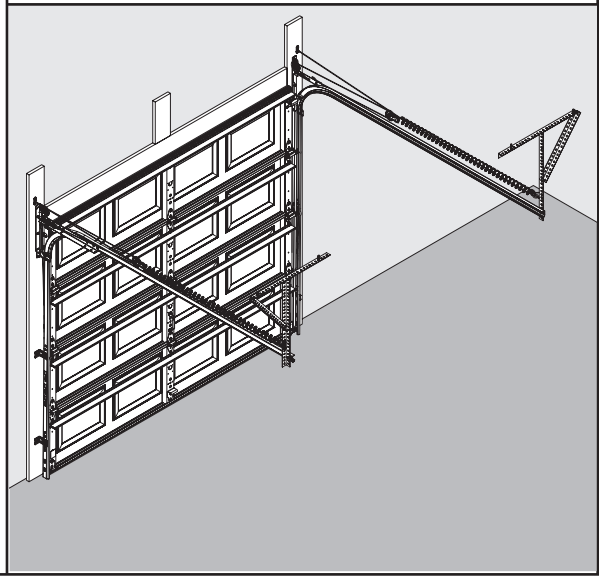
IMPORTANT: Whenever adjusting spring length for door balance, always open the door to the fully open position and return the locking pliers to the horizontal tracks below the bottom rollers.

If the door still does not operate easily, lower the door into the closed position and recheck the following items:

1.) Check the door for level.
2.) Check the distance between flagangles - must be door width plus 3-3/8” +1/4” -0”.
3.) Check the counterbalance cables for equal tension - adjust by re-tieing the special knot.



PERMANENTLY ATTACHED WEATHER SEAL



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Side Lock

Tools Needed:

Power Drill

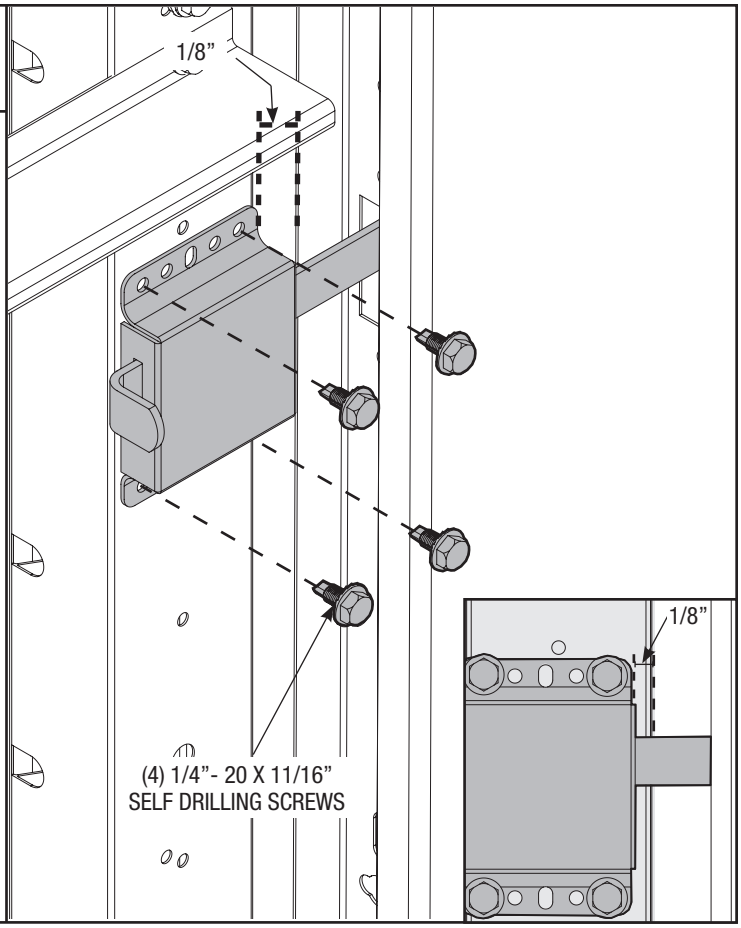
7/16” Socket Driver

Tape Measure

Install the side lock on the second section of the door. Secure the lock to the section with (4) 1/4”- 20 x 11/16” self drilling screws. Square the lock assembly with the door section and align with the square hole in the vertical track. The side lock should be spaced in approximately 1/8” from the section edge.

IMPORTANT: SIDE LOCKS MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION IF AN OPERATOR IS INSTALLED ON THE DOOR.

NOTE: After completing this step, continue with step 15 on page 23.



Pull Rope

Tools Needed:

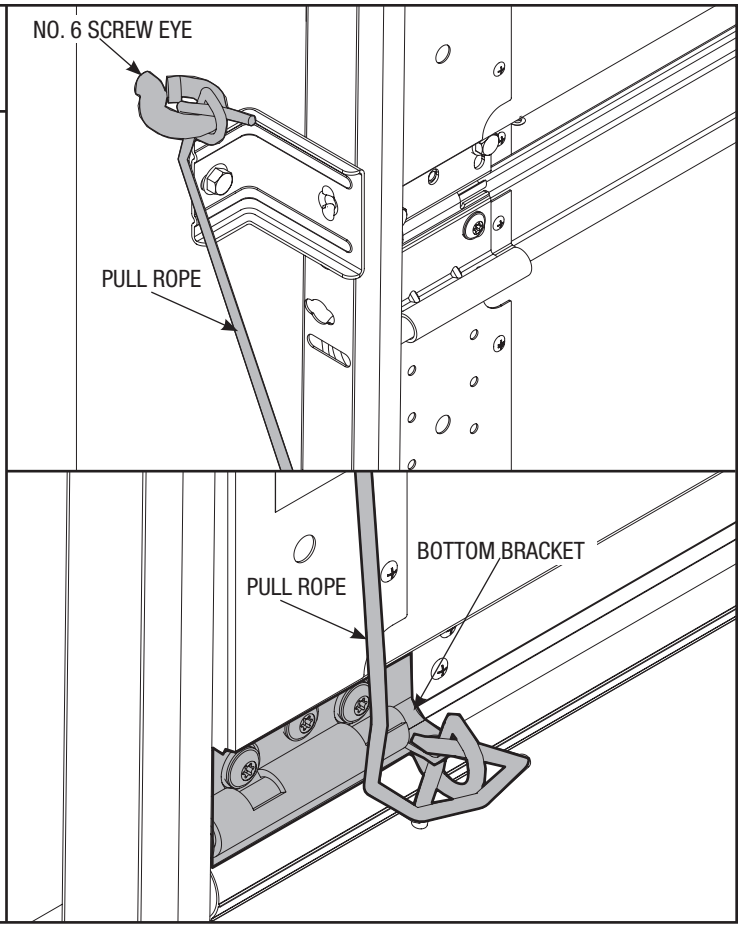
Power Drill

1/8” Drill Bit

⚠ WARNING

DO NOT INSTALL PULL ROPES ON DOORS WITH ELECTRIC OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.

Measure and mark the jamb approximately 48” to 50” (1220 to 1270 mm) from floor on the right or left side of door. Drill 1/8” pilot hole for No. 6 screw eye. Install the No. 6 screw eye. Tie the pull rope to the No. 6 screw eye and to the bottom bracket as shown.



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Trolley Operator

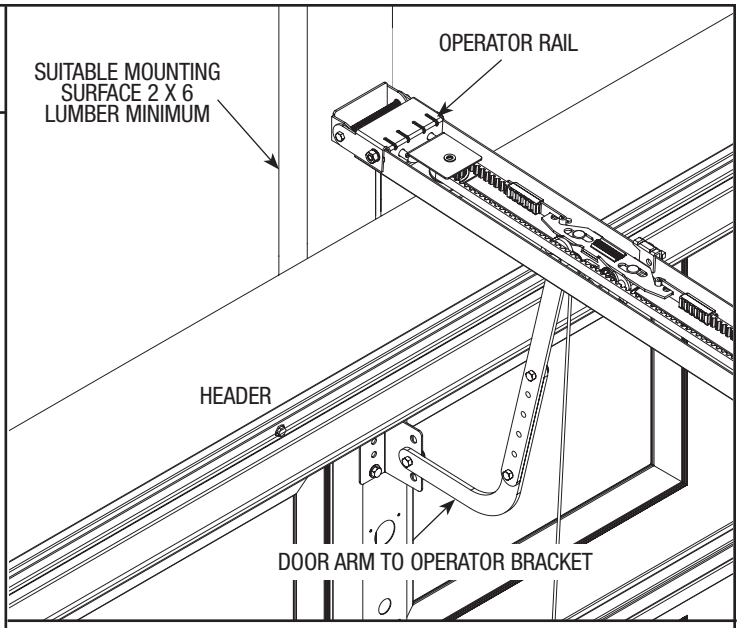
Tools Needed:

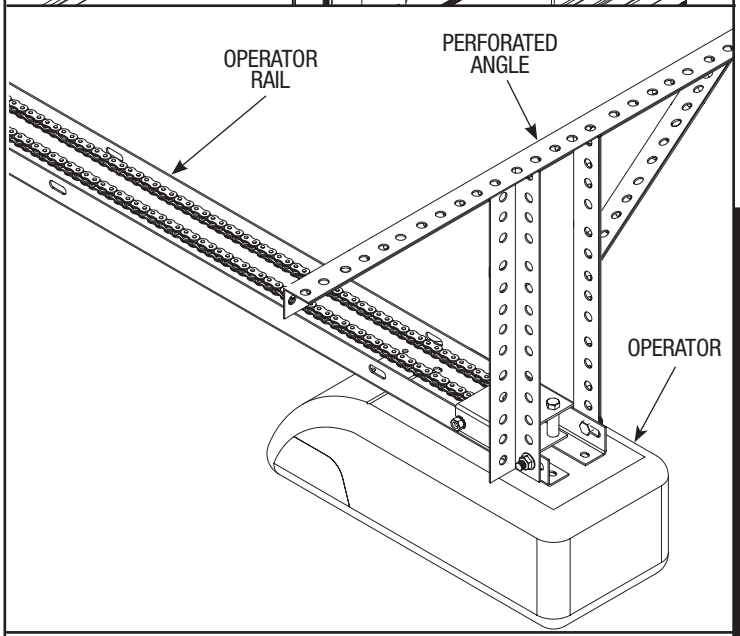
⚠ WARNING

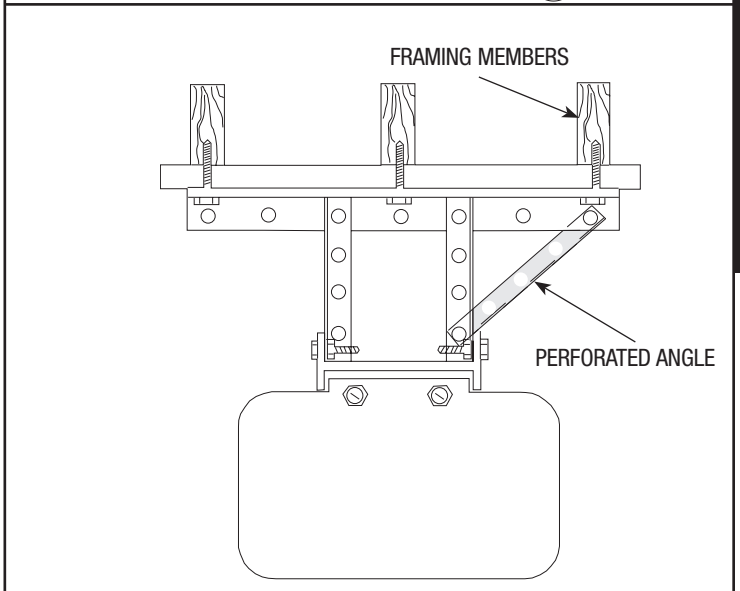
OPERATOR MUST BE TESTED AT TIME OF INSTALLATION AND MONTHLY THEREAFTER TO ENSURE THAT DOOR REVERSES ON CONTACT WITH 2 X 4 BOARD LAID FLAT UNDER THE DOOR. FAILURE TO ADJUST OPERATOR, IF NECESSARY, CAN RESULT IN SEVERE OR FATAL INJURY. IF YOUR OPERATOR IS EQUIPPED WITH A PHOTOELECTRIC EYE SYSTEM, THEN THIS MUST BE TESTED AT THE SAME TIME TO ENSURE THAT DOOR DOES NOT CLOSE AND A CLOSING DOOR OPENS IF PHOTOELECTRIC EYE SYSTEM IS OBSTRUCTED. FAILURE TO MAKE ADJUSTMENTS, IF NECESSARY, CAN RESULT IN SEVERE OR FATAL INJURY.

1. Install operator rail 1/2" to 1-1/2" (13 - 38 mm) above high arc of top section of the door.
2. Mount operator to ceiling so that 1" to 1-1/2" (25 - 38 mm) clearance is maintained between trolley rail and top section when door is fully open (trolley rail will slope down towards rear).
3. Attach door arm to operator bracket installed in Step 10.
4. Attach operator rail to suitable mounting surface, 2 x 6 lumber minimum.
5. Attach operator to ceiling using perforated angle.

IMPORTANT: ANGLES MUST BE SECURELY ATTACHED TO SOUND FRAMING MEMBER(S).







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Cleaning

Cleaning Your Garage Door

IMPORTANT: DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!

While factory-applied finishes on garage doors are durable, it is desirable to clean them on a routine basis. Some discoloration of the finish may occur when a door has been exposed to dirt-laden atmosphere for a period of time. Slight chalking may also occur as a result of direct exposure to sunlight.

Cleaning the door will generally restore the appearance of the finish. To maintain an aesthetically pleasing finish of the garage door, a periodic washing of the garage door is recommended.

The following cleaning solution is recommended
A mild detergent solution consisting of one cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water will aid in the removal of most dirt.

NOTE: The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.

NOTE: Be sure to clean behind weather stripping on both sides and top of door.

CAUTION: NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

GLASS CLEANING INSTRUCTIONS
Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

ACRYLIC CLEANING INSTRUCTIONS
Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

NOTE: DO NOT USE any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.

Painting

Surface Preparation for Painting
Wax on the surface must be removed or paint peeling/flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a fine steel wool pad, saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose particles and any soapy film residue.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or No. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint. Once the substrate is exposed, the likelihood for rusting is greatly increased.

If substrate is exposed, it must be treated to prevent rust from forming. Sand the exposed area lightly and paint with a high quality metal primer, specifically intended for galvanized surfaces, to protect the area from corrosion. Allow for drying time on primer can label before applying topcoat. The surface of the factory-applied finish, that is being painted, must not be too smooth, or the paint will not adhere to it. It is advisable to test in an inconspicuous area, to evaluate adhesion. If poor adhesion is observed, surface preparation for painting the factory-applied finish must be repeated until desired results are achieved. Again, care must be taken to not expose the substrate under the paint.

Painting
After surface has been properly prepared, it must be allowed to dry thoroughly, and then coated immediately with premium quality latex house paint. Follow paint label directions explicitly. Oil base or solvent base paints are not recommended. Please note that if substrate is exposed and not properly primed, painting with latex paint may cause accelerated rusting of the steel in the exposed area.

NOTES:
1. Repainting of finish painted steel doors cannot be warranted, as this condition is totally beyond the door manufacturer's control.
2. Consult a professional coatings contractor if in doubt about any of the above directions.
3. Follow directions explicitly on the paint container labels for proper applications of coatings and disposal of containers. Pay particular attention to acceptable weather and temperature conditions in which to paint.

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Limited Warranty
Models 8000, 8100, 8200 and 46

Subject to the terms and conditions contained in this Limited Warranty, Wayne-Dalton Corp. ("Manufacturer") warrants the sections of the door, which is described at the top of this page, for a period of **TEN (10) YEARS** from the date of installation against:

(i) The door becoming inoperable due to rust-through of the steel skin from the core of the door section, due to cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.

(ii) Peeling of the original paint on the door as a result of a defect in the original paint or in the application of the original paint coating, in cases where the door sections and the original paint: (a) have not been subjected to adverse atmospheric conditions or contaminates (such as salt water or other marine environment, or to toxic or abrasive substances, including those in the air); (b) have been maintained in compliance with Manufacturer's recommendations; and (c) have not been subject to physical abrasion, impacted by a hard object, or punctured (including without limitation "paint rub" occurring in metal to metal contact and movement).

The Manufacturer warrants the garage door hardware (except springs) and the tracks of the above-described door, for a period of **TEN (10) YEARS** from the date of installation, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer warrants those component parts of the door not covered by the preceding provisions of this Limited Warranty against defects in material and workmanship for a period of **ONE (1) YEAR** from the date of installation.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if the original finish is painted over, unless Manufacturer's preparation and painting instructions are followed explicitly. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

THIS LIMITED WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS ACT. NO WARRANTIES, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WILL EXTEND BEYOND THE TIME PERIOD SET FORTH IN **UNDERSCORED BOLD FACE TYPE** IN THIS LIMITED WARRANTY, ABOVE.

- Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will repair or replace the defective product. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL. THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital , cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

- Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

- This Limited Warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.

Please Do Not Return This Product To The Store. Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages/business listings or go to the **Find a Dealer** section online at **www.wayne-dalton.com**

Covered by one or more of the following Patents; 5,408,724; 5,409,051; 5,419,010; 5,495,640; 5,522,446; 5,562,141; 5,566,740; 5,568,672; 5,718,533; 6,019,269; 6,089,304; 6,644,378; 6,374,567; 6,561,256; 6,527,037; 6,640,872; 6,672,362; 6,725,898; 6,843,300; 6,915,573; 6,951,237; 7,014,386; 7,036,548; 7,059,380; 7,121,317; 7,128,123; 7,134,471; 7,134,472; 7,219,392; 7,254,868. Canadian: 2,384,936; 2,477,445; 2,495,175; 2,507,590; 2,530,701; 2,530,74; 2, 2,532,824. Other US and Foreign Patents pending.

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Thank you for your purchase